Homo sapiens seizure related 6 homolog (SEZ6), transcript variant 1, mRNA
>gi|148839279|ref|NM_178860.4|

(SEQ ID NO: 1)

GATCCCCGGCGCCGTCGCCAGGCGCTGGCCGTGGTGCTGATTCTGTCAGGCGCTGGCGGCGGCAGCGGCGGTGACGGCTGCGG
CCCCGCTCCCTCTACCCGGCCGGACCCGGCTCTGCCCCCGCGCCCAAGCCCCACCAAGCCCCCCGCCCTCCCGCCGCGGTCCC
AGCCCAGGGCGCGGCCGCAACCAGCACCATGCGCCCGGTAGCCCTGCTGCTCCTGCCCTCGCTGCTGGCGCTCCTGGCTCACG
GACTCTCTTTAGAGGCCCCAACCGTGGGGAAAGGACAAGCCCCAGGCATCGAGGAGACAGATGGCGAGCTGACAGCAGCCCCC
ACACCTGAGCAGCCAGAACGAGGCGTCCACTTTGTCACAACAGCCCCCACCTTGAAGCTGCTCAACCACCACCCGCTGCTTGA
GGAATTCCTACAAGAGGGGCTGGAAAAGGGAGATGAGGAGCTGAGGCCAGCACTGCCCTTCCAGCCTGACCCACCTGCACCCT
TCACCCCAAGTCCCCTTCCCCGCCTGGCCAACCAGGACAGCCGCCCTGTCTTTACCAGCCCCACTCCAGCCATGGCTGCGGTA
CCCACTCAGCCCCAGTCCAAGGAGGGACCCTGGAGTCCGGAGTCAGAGTCCCCTATGCTTCGAATCACAGCTCCCCTACCTCC
AGGGCCCAGCATGGCAGTGCCCACCCTAGGCCCAGGGGAGATAGCCAGCACTACACCCCCCAGCAGAGCCTGGACACCAACCC
AAGAGGGTCCTGGAGACATGGGAAGGCCGTGGGTTGCAGAGGTTGTGTCCCAGGGCGCAGGGATCGGGATCCAGGGGACCATC
ACCTCCTCCACAGCTTCAGGAGATGATGAGGAGACCACCACTACCACCACCATCATCACCACCACCATCACCACAGTCCAGAC
ACCAGGCCCTTGTAGCTGGAATTTCTCAGGCCCAGAGGGCTCTCTGGACTCCCCTACAGACCTCAGCTCCCCCACTGATGTTG
GCCTGGACTGCTTCTTCTACATCTCTGTCTACCCTGGCTATGGCGTGGAAATCAAGGTCCAGAATATCAGCCTCCGGGAAGGG
GAGACAGTGACTGTGGAAGGCCTGGGGGGGCCTGACCCACTGCCCCTGGCCAACCAGTCTTTCCTGCTGCGGGGCCAAGTCAT
CCGCAGCCCCACCCACCAAGCGGCCCTGAGGTTCCAGAGCCTCCCGCCACCGGCTGGCCCTGGCACCTTCCATTTCCATTACC
AAGCCTATCTCCTGAGCTGCCACTTTCCCCGTCGTCCAGCTTATGGAGATGTGACTGTCACCAGCCTCCACCCAGGGGGTAGT
GCCCGCTTCCATTGTGCCACTGGCTACCAGCTGAAGGGCGCCAGGCATCTCACCTGTCTCAATGCCACCCAGCCCTTCTGGGA
TTCAAAGGAGCCCGTCTGCATCGCTGCTTGCGGCGGAGTGATCCGCAATGCCACCACCGGCCGCATCGTCTCTCCAGGCTTCC
CGGGCAACTACAGCAACAACCTCACCTGTCACTGGCTGCTTGAGGCTCCTGAGGGCCAGCGGCTACACCTGCACTTTGAGAAG
GTTTCCCTGGCAGAGGATGATGACAGGCTCATCATTCGCAATGGGGACAACGTGGAGGCCCCACCAGTGTATGATTCCTATGA
GGTGGAATACCTGCCCATTGAGGGCCTGCTCAGCTCTGGCAAACACTTCTTTGTTGAGCTCAGTACTGACAGCAGCGGGGCAG
CTGCAGGCATGGCCCTGCGCTATGAGGCCTTCCAGCAGGGCCATTGCTATGAGCCCTTTGTCAAATACGGTAACTTCAGCAGC
AGCACACCCACCTACCCTGTGGGTACCACTGTGGAGTTCAGCTGCGACCCTGGCTACACCCTGGAGCAGGGCTCCATCATCAT
CGAGTGTGTTGACCCCCACGACCCCCAGTGGAATGAGACAGAGCCAGCCTGCCGAGCCGTGTGCAGCGGGGAGATCACAGACT
CGGCTGGCGTGGTACTCTCTCCCAACTGGCCAGAGCCCTACGGTCGTGGGCAGGATTGTATCTGGGGTGTGCATGTGGAAGAG
GACAAGCGCATCATGCTGGACATCCGAGTGCTGCGCATAGGCCCTGGTGATGTGCTTACCTTCTATGATGGGGATGACCTGAC
GGCCCGGGTTCTGGGCCAGTACTCAGGGCCCCGTAGCCACTTCAAGCTCTTTACCTCCATGGCTGATGTCACCATTCAGTTCC
AGTCGGACCCCGGGACCTCAGTGCTGGGCTACCAGCAGGGCTTCGTCATCCACTTCTTTGAGGTGCCCCGCAATGACACATGT
CCGGAGCTGCCTGAGATCCCCAATGGCTGGAAGAGCCCATCGCAGCCTGAGCTAGTGCACGGCACCGTGGTCACTTACCAGTG
CTACCCTGGCTACCAGGTAGTGGGATCCAGTGTCCTCATGTGCCAGTGGGACCTAACTTGGAGTGAGGACCTGCCCTCATGCC
AGAGGGTGACTTCCTGCCACGATCCTGGAGATGTGGAGCACAGCCGACGCCTCATATCCAGCCCCAAGTTTCCCGTGGGGGCC
ACCGTGCAATATATCTGTGACCAGGGTTTTGTGCTGATGGGCAGCTCCATCCTCACCTGCCATGATCGCCAGGCTGGCAGCCC
CAAGTGGAGTGACCGGGCCCCTAAATGTCTCCTGGAACAGCTCAAGCCATGCCATGGTCTCAGTGCCCCTGAGAATGGTGCCC
GAAGTCCTGAGAAGCAGCTACACCCAGCAGGGGCCACCATCCACTTCTCGTGTGCCCCTGGCTATGTGCTGAAGGGCCAGGCC
AGCATCAAGTGTGTGCCTGGGCACCCCTCGCATTGGAGTGACCCCCCACCCATCTGTAGGGCTGCCTCTCTGGATGGGTTCTA
CAACAGTCGCAGCCTGGATGTTGCCAAGGCACCTGCTGCCTCCAGCACCCTGGATGCTGCCCACATTGCAGCTGCCATCTTCT
TGCCACTGGTGGCGATGGTGTTGTTGGTAGGAGGTGTATACTTCTACTTCTCCAGGCTCCAGGGAAAAAGCTCCCTGCAGCTG
CCCCGCCCCCGCCCCCGCCCCTACAACCGCATTACCATAGAGTCAGCGTTTGACAATCCAACTTACGAGACTGGATCTCTTTC
CTTTGCAGGAGACGAGAGAATATGAAGTCTCCATCTAGGTGGGGGCAGTCTAGGGAAGTCAACTCAGACTTGCACCACAGTCC
AGCAGCAAGGCTCCTTGCTTCCTGCTGTCCCTCCACCTCCTGTATATACCACCTAGGAGGAGATGCCACCAAGCCCTCAAGAA
GTTGTGCCCTTCCCCGCCTGCGATGCCCACCATGGCCTATTTTCTTGGTGTCATTGCCCACTTGGGGCCCTTCATTGGGCCCA
TGTCAGGGGGCATCTACCTGTGGGAAGAACATAGCTGGAGCACAAGCATCAACAGCCAGCATCCTGAGCCTCCTCATGCCCTG
GACCAGCCTGGAACACACTAGCAGAGCAGGAGTACCTTTCTCCACATGACCACCATCCCGCCCTGGCATGGCAACCTGCAGCA
GGATTAACTTGACCATGGTGGGAACTGCACCAGGGTACTCCTCACAGCGCATCACCAATGGCCAAAACTCCTCTCAACGGTGA
CCTCTGGGTAGTCCTGGCATGCCAACATCAGCCTCTTGGGAGGTCTCTAGTTCTCTAAAGTTCTGGACAGTTCTGCCTCCTGC
CCTGTCCCAGTGGAGGCAGTAATTCTAGGAGATCCTAAGGGGTTCAGGGGGACCCTACCCCCACCTCAGGTTGGGCTTCCCTG
GGCACTCATGCTCCACACCAAAGCAGGACACGCCATTTTCCACTGACCACCCTATACCCTGAGGAAAGGGAGACTTTCCTCCG
ATGTTTATTTAGCTGTTGCAAACATCTTCACCCTAATAGTCCCTCCTCCAATTCCAGCCACTTGTCAGGCTCTCCTCTTGACC
ACTGTGTTATGGGATAAGGGGAGGGGGTGGGCATATTCTGGAGAGGAGCAGAGGTCCAAGGACCCAGGAATTTGGCATGGAAC
AGGTGGTAGGAGAGCCCCAGGGAGACGCCCAGGAGCTGGCTGAAAGCCACTTTGTACATGTAATGTATTATATGGGGTCTGGG
CTCCAGCCAGAGAACAATCTTTTATTTCTGTTGTTTCCTTATTAAAATGGTGTTTTTGGAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAA

FIG. 1A

Homo sapiens seizure related 6 homolog (SEZ6), transcript variant 2, mRNA>gi|148839345|ref|NM_001098635.1|

(SEQ ID NO: 2)

GATCCCCGGCGCCGTCGCCAGGCGCTGGCCGTGGTGCTGATTCTGTCAGGCGCTGGCGGCGGCAGCGGCGGTGACGGCTGCGG
CCCCGCTCCCTCTACCCGGCCGGACCCGGCTCTGCCCCCGCGCCCAAGCCCCACCAAGCCCCCCGCCCTCCCGCCGCGGTCCC
AGCCCAGGGCGCGGCCGCAACCAGCACCATGCGCCCGGTAGCCCTGCTGCTCCTGCCCTCGCTGCTGGCGCTCCTGGCTCACG
GACTCTCTTTAGAGGCCCCAACCGTGGGGAAAGGACAAGCCCCAGGCATCGAGGAGACAGATGGCGAGCTGACAGCAGCCCCC
ACACCTGAGCAGCCAGAACGAGGCGTCCACTTTGTCACAACAGCCCCCACCTTGAAGCTGCTCAACCACCACCCGCTGCTTGA
GGAATTCCTACAAGAGGGGCTGGAAAAGGGAGATGAGGAGCTGAGGCCAGCACTGCCCTTCCAGCCTGACCCACCTGCACCCT
TCACCCCAAGTCCCCTTCCCCGCCTGGCCAACCAGGACAGCCGCCCTGTCTTTACCAGCCCCACTCCAGCCATGGCTGCGGTA
CCCACTCAGCCCCAGTCCAAGGAGGGACCCTGGAGTCCGGAGTCAGAGTCCCCTATGCTTCGAATCACAGCTCCCCTACCTCC
AGGGCCCAGCATGGCAGTGCCCACCCTAGGCCCAGGGGAGATAGCCAGCACTACACCCCCCAGCAGAGCCTGGACACCAACCC
AAGAGGGTCCTGGAGACATGGGAAGGCCGTGGGTTGCAGAGGTTGTGTCCCAGGGCGCAGGGATCGGGATCCAGGGGACCATC
ACCTCCTCCACAGCTTCAGGAGATGATGAGGAGACCACCACTACCACCACCATCATCACCACCACCATCACCACAGTCCAGAC
ACCAGGCCCTTGTAGCTGGAATTTCTCAGGCCCAGAGGGCTCTCTGGACTCCCCTACAGACCTCAGCTCCCCCACTGATGTTG
GCCTGGACTGCTTCTTCTACATCTCTGTCTACCCTGGCTATGGCGTGGAAATCAAGGTCCAGAATATCAGCCTCCGGGAAGGG
GAGACAGTGACTGTGGAAGGCCTGGGGGGGCCTGACCCACTGCCCCTGGCCAACCAGTCTTTCCTGCTGCGGGGCCAAGTCAT
CCGCAGCCCCACCCACCAAGCGGCCCTGAGGTTCCAGAGCCTCCCGCCACCGGCTGGCCCTGGCACCTTCCATTTCCATTACC
AAGCCTATCTCCTGAGCTGCCACTTTCCCCGTCGTCCAGCTTATGGAGATGTGACTGTCACCAGCCTCCACCCAGGGGGTAGT
GCCCGCTTCCATTGTGCCACTGGCTACCAGCTGAAGGGCGCCAGGCATCTCACCTGTCTCAATGCCACCCAGCCCTTCTGGGA
TTCAAAGGAGCCCGTCTGCATCGCTGCTTGCGGCGGAGTGATCCGCAATGCCACCACCGGCCGCATCGTCTCTCCAGGCTTCC
CGGGCAACTACAGCAACAACCTCACCTGTCACTGGCTGCTTGAGGCTCCTGAGGGCCAGCGGCTACACCTGCACTTTGAGAAG
GTTTCCCTGGCAGAGGATGATGACAGGCTCATCATTCGCAATGGGGACAACGTGGAGGCCCCACCAGTGTATGATTCCTATGA
GGTGGAATACCTGCCCATTGAGGGCCTGCTCAGCTCTGGCAAACACTTCTTTGTTGAGCTCAGTACTGACAGCAGCGGGGCAG
CTGCAGGCATGGCCCTGCGCTATGAGGCCTTCCAGCAGGGCCATTGCTATGAGCCCTTTGTCAAATACGGTAACTTCAGCAGC
AGCACACCCACCTACCCTGTGGGTACCACTGTGGAGTTCAGCTGCGACCCTGGCTACACCCTGGAGCAGGGCTCCATCATCAT
CGAGTGTGTTGACCCCCACGACCCCCAGTGGAATGAGACAGAGCCAGCCTGCCGAGCCGTGTGCAGCGGGGAGATCACAGACT
CGGCTGGCGTGGTACTCTCTCCCAACTGGCCAGAGCCCTACGGTCGTGGGCAGGATTGTATCTGGGGTGTGCATGTGGAAGAG
GACAAGCGCATCATGCTGGACATCCGAGTGCTGCGCATAGGCCCTGGTGATGTGCTTACCTTCTATGATGGGGATGACCTGAC
GGCCCGGGTTCTGGGCCAGTACTCAGGGCCCCGTAGCCACTTCAAGCTCTTTACCTCCATGGCTGATGTCACCATTCAGTTCC
AGTCGGACCCCGGGACCTCAGTGCTGGGCTACCAGCAGGGCTTCGTCATCCACTTCTTTGAGGTGCCCCGCAATGACACATGT
CCGGAGCTGCCTGAGATCCCCAATGGCTGGAAGAGCCCATCGCAGCCTGAGCTAGTGCACGGCACCGTGGTCACTTACCAGTG
CTACCCTGGCTACCAGGTAGTGGGATCCAGTGTCCTCATGTGCCAGTGGGACCTAACTTGGAGTGAGGACCTGCCCTCATGCC
AGAGGGTGACTTCCTGCCACGATCCTGGAGATGTGGAGCACAGCCGACGCCTCATATCCAGCCCCAAGTTTCCCGTGGGGGCC
ACCGTGCAATATATCTGTGACCAGGGTTTTGTGCTGATGGGCAGCTCCATCCTCACCTGCCATGATCGCCAGGCTGGCAGCCC
CAAGTGGAGTGACCGGGCCCCTAAATGTCTCCTGGAACAGCTCAAGCCATGCCATGGTCTCAGTGCCCCTGAGAATGGTGCCC
GAAGTCCTGAGAAGCAGCTACACCCAGCAGGGGCCACCATCCACTTCTCGTGTGCCCCTGGCTATGTGCTGAAGGGCCAGGCC
AGCATCAAGTGTGTGCCTGGGCACCCCTCGCATTGGAGTGACCCCCCACCCATCTGTAGGGCTGCCTCTCTGGATGGGTTCTA
CAACAGTCGCAGCCTGGATGTTGCCAAGGCACCTGCTGCCTCCAGCACCCTGGATGCTGCCCACATTGCAGCTGCCATCTTCT
TGCCACTGGTGGCGATGGTGTTGTTGGTAGGAGGTGTATACTTCTACTTCTCCAGGCTCCAGGGAAAAAGCTCCCTGCAGCTG
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AGAATATGAAGTCTCCATCTAGGTGGGGGCAGTCTAGGGAAGTCAACTCAGACTTGCACCACAGTCCAGCAGCAAGGCTCCTT
GCTTCCTGCTGTCCCTCCACCTCCTGTATATACCACCTAGGAGGAGATGCCACCAAGCCCTCAAGAAGTTGTGCCCTTCCCCG
CCTGCGATGCCCACCATGGCCTATTTTCTTGGTGTCATTGCCCACTTGGGGCCCTTCATTGGGCCCATGTCAGGGGGCATCTA
CCTGTGGGAAGAACATAGCTGGAGCACAAGCATCAACAGCCAGCATCCTGAGCCTCCTCATGCCCTGGACCAGCCTGGAACAC
ACTAGCAGAGCAGGAGTACCTTTCTCCACATGACCACCATCCCGCCCTGGCATGGCAACCTGCAGCAGGATTAACTTGACCAT
GGTGGGAACTGCACCAGGGTACTCCTCACAGCGCCATCACCAATGGCCAAAACTCCTCTCAACGGTGACCTCTGGGTAGTCCT
GGCATGCCAACATCAGCCTCTTGGGAGGTCTCTAGTTCTCTAAAGTTCTGGACAGTTCTGCCTCCTGCCCTGTCCCAGTGGAG
GCAGTAATTCTAGGAGATCCTAAGGGGTTCAGGGGGACCCTACCCCCACCTCAGGTTGGGCTTCCCTGGGCACTCATGCTCCA
CACCAAAGCAGGACACGCCATTTTCCACTGACCACCCTATACCCTGAGGAAAGGGAGACTTTCCTCCGATGTTTATTTAGCTG
TTGCAAACATCTTCACCCTAATAGTCCCTCCTCCAATTCCAGCCACTTGTCAGGCTCTCCTCTTGACCACTGTGTTATGGGAT
AAGGGGAGGGGGTGGGCATATTCTGGAGAGGAGCAGAGGTCCAAGGACCCAGGAATTTGGCATGGAACAGGTGGTAGGAGAGC
CCCAGGGAGACGCCCAGGAGCTGGCTGAAAGCCACTTTGTACATGTAATGTATTATATGGGGTCTGGGCTCCAGCCAGAGAAC
AATCTTTTATTTCTGTTGTTTCCTTATTAAAATGGTGTTTTTGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
A

FIG. 1B

Homo sapiens seizure protein 6 homolog isoform 1 precursor
>gi|148839280|ref|NP_849191.3|

(SEQ ID NO: 3)

MRPVALLLLPSLLALLAHGLSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPTLKLLNHH
PLLEEFLQEGLEKGDEELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAMAAVPTQPQSKEGP
WSPESESPMLRITAPLPPGPSMAVPTLGPGEIASTTPPSRAWTPTQEGPGDMGRPWVAEVVSQGAGI
GIQGTITSSTASGDDEETTTTTTIITTTITTVQTPGPCSWNFSGPEGSLDSPTDLSSPTDVGLDCFFYISVYP
GYGVEIKVQNISLREGETVTVEGLGGPDPLPLANQSFLLRGQVIRSPTHQAALRFQSLPPPAGPGTFHFH
YQAYLLSCHFPRRPAYGDVTVTSLHPGGSARFHCATGYQLKGARHLTCLNATQPFWDSKEPVCIAACGG
VIRNATTGRIVSPGFPGNYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLIIRNGDNVEAPPVYDSY
EVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSSTPTYPVGTTVEFS
CDPGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEPYGRGQDCIWGVHVE
EDKRIMLDIRVLRIGPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMADVTIQFQSDPGTSVLGYQQ
GFVIHFFEVPRNDTCPELPEIPNGWKSPSQPELVHGTVVTYQCYPGYQVVGSSVLMCQWDLTWSEDL
PSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICDQGFVLMGSSILTCHDRQAGSPKWSDRAPKCL
LEQLKPCHGLSAPENGARSPEKQLHPAGATIHFSCAPGYVLKGQASIKCVPGHPSHWSDPPPICRAASL
DGFYNSRSLDVAKAPAASSTLDAAHIAAAIFLPLVAMVLLVGGVYFYFSRLQGKSSLQLPRPRPRPYNRITI
ESAFDNPTYETGSLSFAGDERI

FIG. 1C

Homo sapiens seizure protein 6 homolog isoform 2 precursor >gi|148839346|ref|NP_001092105.1|

(SEQ ID NO: 4)

MRPVALLLLPSLLALLAHGLSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPT
LKLLNHHPLLEEFLQEGLEKGDEELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAM
AAVPTQPQSKEGPWSPESESPMLRITAPLPPGPSMAVPTLGPGEIASTTPPSRAWTPTQEG
PGDMGRPWVAEVVSQGAGIGIQGTITSSTASGDDEETTTTTTIITTTITTVQTPGPCSWNFS
GPEGSLDSPTDLSSPTDVGLDCFFYISVYPGYGVEIKVQNISLREGETVTVEGLGGPDPLPLA
NQSFLLRGQVIRSPTHQAALRFQSLPPPAGPGTFHFHYQAYLLSCHFPRRPAYGDVTVTSLH
PGGSARFHCATGYQLKGARHLTCLNATQPFWDSKEPVCIAACGGVIRNATTGRIVSPGFPG
NYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLIIRNGDNVEAPPVYDSYEVEYLPIEG
LLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSSTPTYPVGTTVEFSC
DPGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEPYGRGQDCI
WGVHVEEDKRIMLDIRVLRIGPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMADVTIQ
FQSDPGTSVLGYQQGFVIHFFEVPRNDTCPELPEIPNGWKSPSQPELVHGTVVTYQCYPGY
QVVGSSVLMCQWDLTWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICDQG
FVLMGSSILTCHDRQAGSPKWSDRAPKCLLEQLKPCHGLSAPENGARSPEKQLHPAGATIH
FSCAPGYVLKGQASIKCVPGHPSHWSDPPPICRAASLDGFYNSRSLDVAKAPAASSTLDAAH
IAAAIFLPLVAMVLLVGGVYFYFSRLQGKSSLQLPRPRPRPYNRITIESAFDNPTYETGETREYE
VSI

FIG. 1D

Alignment of SEZ6 Isoforms

```
                                1                                                                                80
   hSEZ6v1 (NP_849191)     (1) MRPVALLLLPSLLALLAHGLSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPTLKLLNHHPLLEEFLQEG
hSEZ6v2 (NP_001092105)     (1) MRPVALLLLPSLLALLAHGLSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPTLKLLNHHPLLEEFLQEG
                               81                                                                               160
   hSEZ6v1 (NP_849191)    (81) LEKGDEELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAMAAVPTQPQSKEGPWSPESESPMLRITAPLPPGPS
hSEZ6v2 (NP_001092105)    (81) LEKGDEELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAMAAVPTQPQSKEGPWSPESESPMLRITAPLPPGPS
                              161                                                                               240
   hSEZ6v1 (NP_849191)   (161) MAVPTLGPGEIASTTPPSRAWTPTQEGPGDMGRPWVAEVVSQGAGIGIQGTITSSTASGDDEETTTTTIITTTITTVQT
hSEZ6v2 (NP_001092105)   (161) MAVPTLGPGEIASTTPPSRAWTPTQEGPGDMGRPWVAEVVSQGAGIGIQGTITSSTASGDDEETTTTTIITTTITTVQT
                              241                                                                               320
   hSEZ6v1 (NP_849191)   (241) PGPCSWNFSGPEGSLDSPTDLSSPTDVGLDCFFYISVYPGYGVEIKVQNISLREGETVTVEGLGGPDPLPLANQSFLLRG
hSEZ6v2 (NP_001092105)   (241) PGPCSWNFSGPEGSLDSPTDLSSPTDVGLDCFFYISVYPGYGVEIKVQNISLREGETVTVEGLGGPDPLPLANQSFLLRG
                              321                                                                               400
   hSEZ6v1 (NP_849191)   (321) QVIRSPTHQAALRFQSLPPPAGPGTFHFHYQAYLLSCHFPRRPAYGDVTVTSLHPGGSARFHCATGYQLKGARHLTCLNA
hSEZ6v2 (NP_001092105)   (321) QVIRSPTHQAALRFQSLPPPAGPGTFHFHYQAYLLSCHFPRRPAYGDVTVTSLHPGGSARFHCATGYQLKGARHLTCLNA
                              401                                                                               480
   hSEZ6v1 (NP_849191)   (401) TQPFWDSKEPVCIAACGGVIRNATTGRIVSPGFPGNYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLIIRNGDNVE
hSEZ6v2 (NP_001092105)   (401) TQPFWDSKEPVCIAACGGVIRNATTGRIVSPGFPGNYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLIIRNGDNVE
                              481                                                                               560
   hSEZ6v1 (NP_849191)   (481) APPVYDSYEVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSSTPTYPVGTTVEFSCD
hSEZ6v2 (NP_001092105)   (481) APPVYDSYEVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSSTPTYPVGTTVEFSCD
                              561                                                                               640
   hSEZ6v1 (NP_849191)   (561) PGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEPYGRGQDCIWGVHVEEDKRIMLDIRVLRI
hSEZ6v2 (NP_001092105)   (561) PGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEPYGRGQDCIWGVHVEEDKRIMLDIRVLRI
                              641                                                                               720
   hSEZ6v1 (NP_849191)   (641) GPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMADVTIQFQSDPGTSVLGYQQGFVIHFFEVPRNDTCPELPEIPNGW
hSEZ6v2 (NP_001092105)   (641) GPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMADVTIQFQSDPGTSVLGYQQGFVIHFFEVPRNDTCPELPEIPNGW
                              721                                                                               800
   hSEZ6v1 (NP_849191)   (721) KSPSQPELVHGTVVTYQCYPGYQVVGSSVLMCQWDLTWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICD
hSEZ6v2 (NP_001092105)   (721) KSPSQPELVHGTVVTYQCYPGYQVVGSSVLMCQWDLTWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICD
                              801                                                                               880
   hSEZ6v1 (NP_849191)   (801) QGFVLMGSSILTCHDRQAGSPKWSDRAPKCLLEQLKPCHGLSAPENGARSPEKQLHPAGATIHFSCAPGYVLKGQASIKC
hSEZ6v2 (NP_001092105)   (801) QGFVLMGSSILTCHDRQAGSPKWSDRAPKCLLEQLKPCHGLSAPENGARSPEKQLHPAGATIHFSCAPGYVLKGQASIKC
                              881                                                                               960
   hSEZ6v1 (NP_849191)   (881) VPGHPSHWSDPPPICRAASLDGFYNSRSLDVAKAPAASSTLDAAHIAAAIFLPLVAMVLLVGGVYFYFSRLQGKSSLQLP
hSEZ6v2 (NP_001092105)   (881) VPGHPSHWSDPPPICRAASLDGFYNSRSLDVAKAPAASSTLDAAHIAAAIFLPLVAMVLLVGGVYFYFSRLQGKSSLQLP
                              961                          994
   hSEZ6v1 (NP_849191)   (961) RPRPRPYNRITIESAFDNPTYETGSLSFAGDERI    (SEQ ID NO: 3)
hSEZ6v2 (NP_001092105)   (961) RPRPRPYNRITIESAFDNPTYETGETREYEVSI-    (SEQ ID NO: 4)
```

FIG. 1E

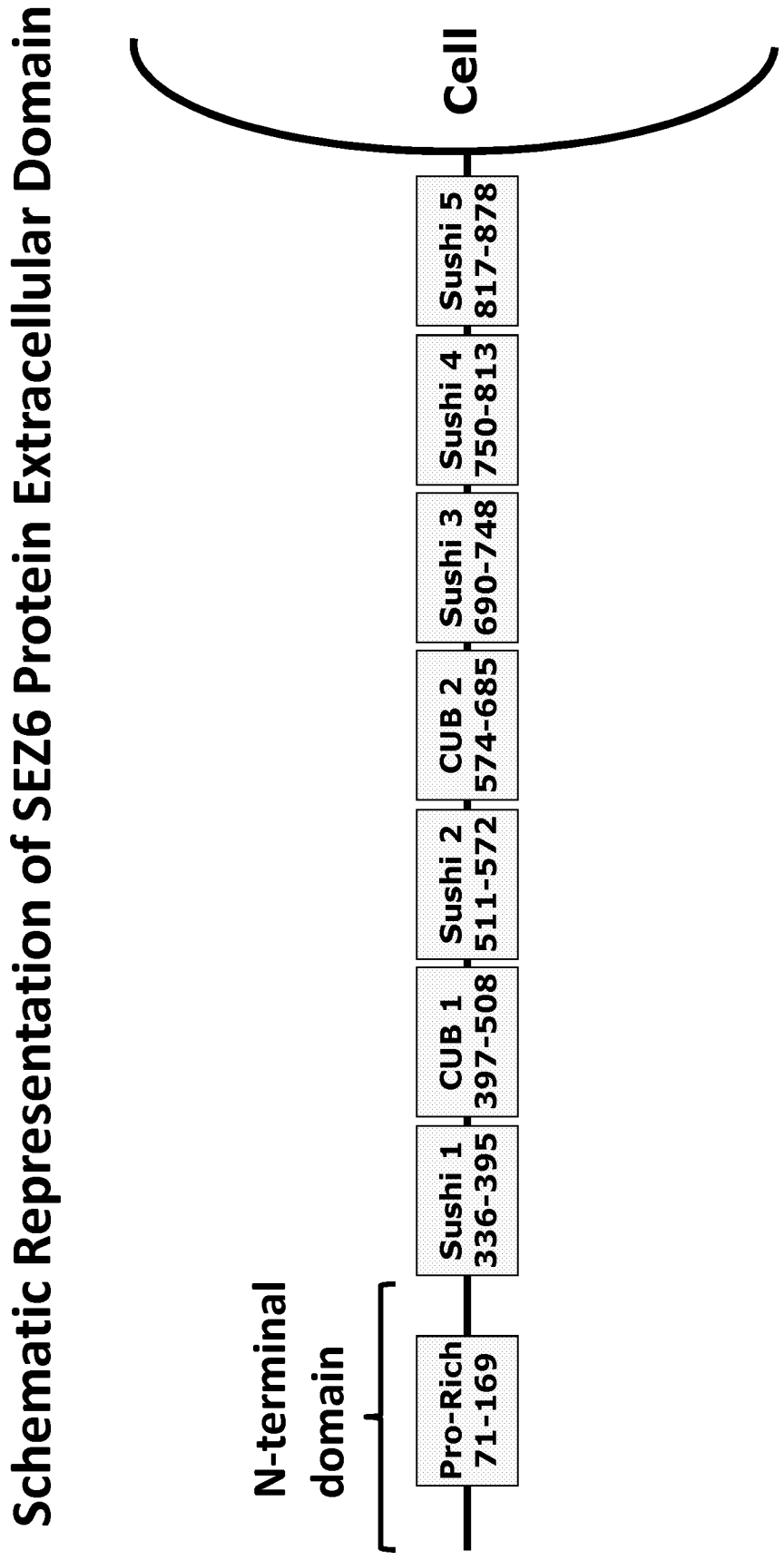

Schematic Representation of SEZ6 Protein Extracellular Domain
Cell
N-terminal domain
Pro-Rich 71-169
Sushi 1 336-395
CUB 1 397-508
Sushi 2 511-572
CUB 2 574-685
Sushi 3 690-748
Sushi 4 750-813
Sushi 5 817-878

FIG. 1F

Percent Identity Between Full Length Mature SEZ6 Proteins from Various Species

SEZ6	rhesus (XP_001110503)	Cynomolgus (herein)	mouse (NP_067261)	rat (NP_001089224)
Human 1 (NP_849191)		97.5%	90.5%	90.4%
Human 2 (NP_001092105)	91.7%			
rhesus (XP_001110503)		93.0%		
mouse (NP_067261)			96.7%	

FIG. 2A

Homo Sapiens SEZ6, SEZ6L, and SEZ6L2 Sequence Accession Numbers - NCBI

		mRNA	protein
SEZ6	1	NM_178860	NP_849191
	2	NM_001098635	NP_001092105
SEZ6L	1	NM_021115	NP_066938
	2	NM_001184773	NP_001171702
	3	NM_001184774	NP_001171703
	4	NM_001184775	NP_001701704
	5	NM_001184776	NP_001171705
	6	NM_001184777	NP_001171706
SEZ6L2	1	NM_012410	NP_036542
	2	NM_201575	NP_963869
	3	NM_001114099	NP_001107571
	4	NM_001114100	NP_001107572
	5	NM_001243332	NP_001230261
	6	NM_001243333	NP_001230262

FIG. 2B

Percent Identity between Various Human SEZ6, SEZ6L and SEZ6L2 Proteins

Complete protein		
Homo sapiens	SEZ6L1 (NP_669738)	SEZ6L2V5 (NP_001230261)
SEZ6v1 (NP_849191)	42.5%	42.9%
SEZ6Lv1 (NP_669738)		41.1%

ECD		
Homo sapiens	SEZ6L1 (NP_669738)	SEZ6L2V5 (NP_001230261)
SEZ6v1 (NP_849191)	42.4%	43.2%
SEZ6Lv1 (NP_669738)		40.5%

FIG. 2C

>cDNA Sequence of human SEZ6 ORF

(SEQ ID NO: 5)

CTGAGCCTGGAGGCCCCAACCGTGGGGAAAGGACAAGCCCCAGGCATCGAGGAGACAGATGGCGAGCTGACAGCAGCCCCCACACCTGAGCAGCCAGAAC
GAGGCGTCCACTTTGTCACAACAGCCCCCACCTTGAAGCTGCTCAACCACCACCCGCTGCTTGAGGAATTCCTACAAGAGGGGCTGGAAAAGGGAGATGAGG
AGTTGAGGCCAGCACTGCCCTTCCAGCCTGACCCACCTGCACCCTTCACCCCAAGTCCCCTTCCCCGCCTGGCCAACCAGGACAGCCGCCCTGTCTTTACCAGC
CCCACTCCAGCCATGGCTGCGGTACCCACTCAGCCCCAGTCCAAGGAGGGACCCTGGAGTCCGGAGTCAGAGTCCCCTATGCTTCGAATCACAGCTCCCCTAC
CTCCAGGGCCCAGCATGGCAGTGCCCACCCTAGGCCCAGGGGAGATAGCCAGCACTACACCCCCCAGCAGAGCCTGGACACCAACCCAAGAGGGTCCTGGA
GACATGGGAAGGCCGTGGGTTGCAGAGGTTGTGTCCCAGGGCGCGGGGATCGGGATCCAGGGGACCATCACCTCCTCCACAGCTTCAGGAGATGATGAGG
AGACCACCACTACCACCACCATCATCACCACCACCATCACCACAGTCCAGACACCAGGCCCTTGTAGCTGGAATTTCTCAGGCCCAGAGGGCTCTCTGGACTCC
CCTACAGACCTCAGCTCCCCCACTGATGTTGGCCTGGACTGCTTCTTCTACATCTCTGTCTACCCTGGCTATGGCGTGGAAATCAAGGTCCAGAATATCAGCCT
CCGGGAAGGGGAGACAGTGACTGTGGAAGGCCTGGGGGGGCCCGACCCACTGCCCCTGGCCAACCAGTCTTTCCTGCTGCGGGGCCAAGTCATCCGCAGCC
CCACCCACCAAGCGGCCCTGAGGTTCCAGAGCCTCCCGCCACCGGCTGGCCCTGGCACCTTCCATTTCCATTACCAAGCCTATCTCCTGAGCTGCCACTTTCCCC
GTCGTCCAGCTTATGGAGATGTGACTGTCACCAGCCTCCACCCAGGGGGTAGTGCCCGCTTCCATTGTGCCACTGGCTACCAGCTGAAGGGCGCCAGGCATC
TCACCTGTCTCAATGCCACCCAGCCCTTCTGGGATTCAAAGGAGCCCGTCTGCATCGCTGCTTGCGGCGGAGTGATCCGCAATGCCACCACCGGCCGCATCGT
CTCTCCAGGCTTCCCGGGCAACTACAGCAACAACCTCACCTGTCACTGGCTGCTTGAGGCTCCTGAGGGCCAGCGGCTACACCTGCACTTTGAGAAGGTTTCC
CTGGCAGAGGATGATGACAGGCTCATCATTCGCAATGGGGACAACGTGGAGGCCCCACCAGTGTATGATTCCTATGAGGTGGAATACCTGCCCATTGAGGG
CCTGCTCAGCTCTGGCAAACACTTCTTTGTTGAGCTCAGTACTGACAGCAGCGGGGCAGCTGCAGGCATGGCCCTGCGCTATGAGGCCTTCCAGCAGGGCCA
TTGCTATGAGCCCTTTGTCAAATACGGTAACTTCAGCAGCAGCACACCCACCTACCCTGTGGGTACCACTGTGGAGTTCAGCTGCGACCCTGGCTACACCCTG
GAGCAGGGCTCCATCATCATCGAGTGTGTTGACCCCCACGACCCCCAGTGGAATGAGACAGAGCCAGCCTGCCGAGCCGTGTGCAGCGGGGAGATCACAGA
CTCGGCTGGCGTGGTACTCTCTCCCAACTGGCCAGAGCCCTACGGTCGTGGGCAGGATTGTATCTGGGGTGTGCATGTGGAAGAGGACAAGCGCATCATGCT
GGACATCCGAGTGCTGCGCATAGGCCCTGGTGATGTGCTTACCTTCTATGATGGGGATGACCTGACGGCCCGGGTTCTGGGCCAGTACTCAGGGCCCCGTAG
CCACTTCAAGCTCTTTACCTCCATGGCTGATGTCACCATTCAGTTCCAGTCGGACCCCGGGACCTCAGTGCTGGGCTACCAGCAGGGCTTCGTCATCCACTTCT
TTGAGGTGCCCCGCAATGACACATGTCCGGAGCTGCCTGAGATCCCCAATGGCTGGAAGAGCCCATCGCAGCCTGAGCTAGTGCACGGCACCGTGGTCACTT
ACCAGTGCTACCCTGGCTACCAGGTAGTGGGATCCAGTGTCCTCATGTGCCAGTGGGACCTAACTTGGAGTGAGGACCTGCCCTCATGCCAGAGGGTGACTT
CCTGCCACGATCCTGGAGATGTGGAGCACAGCCGACGCCTCATATCCAGCCCCAAGTTTCCCGTGGGGGCCACCGTGCAATATATCTGTGACCAGGGTTTTGT
GCTGATGGGCAGCTCCATCCTCACCTGCCATGATCGCCAGGCTGGCAGCCCCAAGTGGAGTGACCGGGCCCCTAAATGTCTCCTGGAACAGCTCAAGCCATG
CCATGGTCTCAGTGCCCCTGAGAATGGTGCCCGAAGTCCTGAGAAGCAGCTACACCCAGCAGGGGCCACCATCCACTTCTCGTGTGCCCCTGGCTATGTGCTG
AAGGGCCAGGCCAGCATCAAGTGTGTGCCTGGGCACCCCTCGCATTGGAGTGACCCCCCACCCATCTGTAGGGCTGCCTCTCTGGATGGGTTCTACAACAGT
CGCAGCCTGGATGTTGCCAAGGCACCTGCTGCCTCCAGCACCCTGGATGCTGCCCACATTGCAGCTGCCATCTTCTTGCCACTGGTGGCGATGGTGTTGTTGG
TAGGAGGTGTATACTTCTACTTCTCCAGGCTCCAGGGAAAAAGCTCCCTGCAGCTGCCCCGCCCCCGCCCCCGCCCCTACAACCGCATTACCATAGAGTCAGC
GTTTGACAATCCAACTTACGAGACTGGATCTCTTTCCTTTGCAGGAGACGAGAGAATA

FIG. 3A

> Translation of human SEZ6 ORF

(SEQ ID NO: 6)

LSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPTLKLLNHHPLLEEFLQEGLEKGDE
ELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAMAAVPTQPQSKEGPWSPESESPMLRIT
APLPPGPSMAVPTLGPGEIASTTPPSRAWTPTQEGPGDMGRPWVAEVVSQGAGIGIQGTITSST
ASGDDEETTTTTTIITTTITTVQTPGPCSWNFSGPEGSLDSPTDLSSPTDVGLDCFFYISVYPGYGVE
IKVQNISLREGETVTVEGLGGPDPLPLANQSFLLRGQVIRSPTHQAALRFQSLPPPAGPGTFHFHY
QAYLLSCHFPRRPAYGDVTVTSLHPGGSARFHCATGYQLKGARHLTCLNATQPFWDSKEPVCIAA
CGGVIRNATTGRIVSPGFPGNYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLIIRNGDNVE
APPVYDSYEVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSST
PTYPVGTTVEFSCDPGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEP
YGRGQDCIWGVHVEEDKRIMLDIRVLRIGPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMAD
VTIQFQSDPGTSVLGYQQGFVIHFFEVPRNDTCPELPEIPNGWKSPSQPELVHGTVVTYQCYPGY
QVVGSSVLMCQWDLTWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICDQGFVL
MGSSILTCHDRQAGSPKWSDRAPKCLLEQLKPCHGLSAPENGARSPEKQLHPAGATIHFSCAPGY
VLKGQASIKCVPGHPSHWSDPPPICRAASLDGFYNSRSLDVAKAPAASSTLDAAHIAAAIFLPLVA
MVLLVGGVYFYFSRLQGKSSLQLPRPRPRPYNRITIESAFDNPTYETGSLSFAGDERI

FIG. 3B

Alignment of SEZ6 Variants

```
                    1                                                                                80
hSEZ6 BC146292    (1) MRPVALLLLPSLLALLAHGLSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPTLKLLNHHPLLEEFLQEG
hSEZ6 NP_849191   (1) MRPVALLLLPSLLALLAHGLSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPTLKLLNHHPLLEEFLQEG
                    81                                                                               160
hSEZ6 BC146292   (81) LEKGDEELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAMAAVPTQPQSKEGPWSPESESPMLRITAPLPPGPS
hSEZ6 NP_849191  (81) LEKGDEELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAMAAVPTQPQSKEGPWSPESESPMLRITAPLPPGPS
                   161                                                                               240
hSEZ6 BC146292  (161) MAVPTLGPGEIASTTPPSRAWTPTQEGPGDMGRPWVAEVVSQGAGIGIQGTITSSTASGDDEETTTTTTIITTTITTVQT
hSEZ6 NP_849191 (161) MAVPTLGPGEIASTTPPSRAWTPTQEGPGDMGRPWVAEVVSQGAGIGIQGTITSSTASGDDEETTTTTTIITTTITTVQT
                   241                                                                               320
hSEZ6 BC146292  (241) PGPCSWNFSGPEGSLDSPTDLSSPTDVGLDCFFYISVYPGYGVEIKVQNISLREGETVTVEGLGGPDPLPLANQSFLLRG
hSEZ6 NP_849191 (241) PGPCSWNFSGPEGSLDSPTDLSSPTDVGLDCFFYISVYPGYGVEIKVQNISLREGETVTVEGLGGPDPLPLANQSFLLRG
                   321                                                                               400
hSEZ6 BC146292  (321) QVIRSPTHQAALRFQSLPPPAGPGTFHFHYQAYLLSCHFPRRPAYGDVTVTSLHPGGSARFHCATGYQLKGARHLTCLNA
hSEZ6 NP_849191 (321) QVIRSPTHQAALRFQSLPPPAGPGTFHFHYQAYLLSCHFPRRPAYGDVTVTSLHPGGSARFHCATGYQLKGARHLTCLNA
                   401          ** *                                                                 480
hSEZ6 BC146292  (401) TQPFWDSKEPVCIGECPGVIRNATTGRIVSPGFPGNYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLIIRNGDNVE
hSEZ6 NP_849191 (401) TQPFWDSKEPVCIAACGGVIRNATTGRIVSPGFPGNYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLIIRNGDNVE
                   481                                                                               560
hSEZ6 BC146292  (481) APPVYDSYEVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSSTPTYPVGTTVEFSCD
hSEZ6 NP_849191 (481) APPVYDSYEVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSSTPTYPVGTTVEFSCD
                   561                                                                               640
hSEZ6 BC146292  (561) PGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEPYGRGQDCIWGVHVEEDKRIMLDIRVLRI
hSEZ6 NP_849191 (561) PGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEPYGRGQDCIWGVHVEEDKRIMLDIRVLRI
                   641                                                                               720
hSEZ6 BC146292  (641) GPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMADVTIQFQSDPGTSVLGYQQGFVIHFFEVPRNDTCPELPEIPNGW
hSEZ6 NP_849191 (641) GPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMADVTIQFQSDPGTSVLGYQQGFVIHFFEVPRNDTCPELPEIPNGW
                   721                                                                               800
hSEZ6 BC146292  (721) KSPSQPELVHGTVVTYQCYPGYQVVGSSVLMCQWDLTWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICD
hSEZ6 NP_849191 (721) KSPSQPELVHGTVVTYQCYPGYQVVGSSVLMCQWDLTWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICD
                   801                                                                               880
hSEZ6 BC146292  (801) QGFVLMGSSILTCHDRQAGSPKWSDRAPKCLLEQLKPCHGLSAPENGARSPEKQLHPAGATIHFSCAPGYVLKGQASIKC
hSEZ6 NP_849191 (801) QGFVLMGSSILTCHDRQAGSPKWSDRAPKCLLEQLKPCHGLSAPENGARSPEKQLHPAGATIHFSCAPGYVLKGQASIKC
                   881                                                                               960
hSEZ6 BC146292  (881) VPGHPSHWSDPPPICRAASLDGFYNSRSLDVAKAPAASSTLDAAHIAAAIFLPLVAMVLLVGGVYFYFSRLQGKSSLQLP
hSEZ6 NP_849191 (881) VPGHPSHWSDPPPICRAASLDGFYNSRSLDVAKAPAASSTLDAAHIAAAIFLPLVAMVLLVGGVYFYFSRLQGKSSLQLP
                   961                          994
hSEZ6 BC146292  (961) RPRPRPYNRITIESAFDNPTYETGSLSFAGDERI          (SEQ ID NO: 7)
hSEZ6 NP_849191 (961) RPRPRPYNRITIESAFDNPTYETGSLSFAGDERI          (SEQ ID NO: 3)
```

FIG. 3C

>human SEZ6-Fc ORF

(SEQ ID NO: 8)

ATGGAGACAGACACACTCCTGCTATGGGTACTGCTGCTCTGGGTTCCCGGGTCCACTGGTGAC**GGCGCGCCTGGATCC**CTGAGCCTGGAGGCCCCAACCGTGGGGAAAGG
ACAAGCCCCAGGCATCGAGGAGACAGATGGCGAGCTGACAGCAGCCCCCACACCTGAGCAGCCAGAACGAGGCGTCCACTTTGTCACAACAGCCCCCACCTTGAAGCTGCT
CAACCACCACCCGCTGCTTGAGGAATTCCTACAAGAGGGGCTGGAAAAGGGAGATGAGGAGTTGAGGCCAGCACTGCCCTTCCAGCCTGACCCACCTGCACCCTTCACCCC
AAGTCCCCTTCCCCGCCTGGCCAACCAGGACAGCCGCCCTGTCTTTACCAGCCCCACTCCAGCCATGGCTGCGGTACCCACTCAGCCCCAGTCCAAGGAGGGACCCTGGAGT
CCGGAGTCAGAGTCCCCTATGCTTCGAATCACAGCTCCCCTACCTCCAGGGCCCAGCATGGCAGTGCCCACCCTAGGCCCAGGGGAGATAGCCAGCACTACACCCCCCAGCA
GAGCCTGGACACCAACCCAAGAGGGTCCTGGAGACATGGGAAGGCCGTGGGTTGCAGAGGTTGTGTCCCAGGGCGCGGGGATCGGGATCCAGGGGACCATCACCTCCTCC
ACAGCTTCAGGAGATGATGAGGAGACCACCACTACCACCACCATCATCACCACCACCATCACCACAGTCCAGACACCAGGCCCTTGTAGCTGGAATTTCTCAGGCCCAGAGG
GCTCTCTGGACTCCCCTACAGACCTCAGCTCCCCCACTGATGTTGGCCTGGACTGCTTCTTCTACATCTCTGTCTACCCTGGCTATGGCGTGGAAATCAAGGTCCAGAATATCA
GCCTCCGGGAAGGGGAGACAGTGACTGTGGAAGGCCTGGGGGGGCCCGACCCACTGCCCCTGGCCAACCAGTCTTTCCTGCTGCGGGGCCAAGTCATCCGCAGCCCCACC
CACCAAGCGGCCCTGAGGTTCCAGAGCCTCCCGCCACCGGCTGGCCCTGGCACCTTCCATTTCCATTACCAAGCCTATCTCCTGAGCTGCCACTTTCCCCGTCGTCCAGCTTAT
GGAGATGTGACTGTCACCAGCCTCCACCCAGGGGGTAGTGCCCGCTTCCATTGTGCCACTGGCTACCAGCTGAAGGGCGCCAGGCATCTCACCTGTCTCAATGCCACCCAGC
CCTTCTGGGATTCAAAGGAGCCCGTCTGCATCGCTGCTTGCGGCGGAGTGATCCGCAATGCCACCACCGGCCGCATCGTCTCTCCAGGCTTCCCGGGCAACTACAGCAACAA
CCTCACCTGTCACTGGCTGCTTGAGGCTCCTGAGGGCCAGCGGCTACACCTGCACTTTGAGAAGGTTTCCCTGGCAGAGGATGATGACAGGCTCATCATTCGCAATGGGGAC
AACGTGGAGGCCCCACCAGTGTATGATTCCTATGAGGTGGAATACCTGCCCATTGAGGGCCTGCTCAGCTCTGGCAAACACTTCTTTGTTGAGCTCAGTACTGACAGCAGCG
GGGCAGCTGCAGGCATGGCCCTGCGCTATGAGGCCTTCCAGCAGGGCCATTGCTATGAGCCCTTTGTCAAATACGGTAACTTCAGCAGCAGCACACCCACCTACCCTGTGGG
TACCACTGTGGAGTTCAGCTGCGACCCTGGCTACACCCTGGAGCAGGGCTCCATCATCATCGAGTGTGTTGACCCCCACGACCCCCAGTGGAATGAGACAGAGCCAGCCTGC
CGAGCCGTGTGCAGCGGGGAGATCACAGACTCGGCTGGCGTGGTACTCTCTCCCAACTGGCCAGAGCCCTACGGTCGTGGGCAGGATTGTATCTGGGGTGTGCATGTGGA
AGAGGACAAGCGCATCATGCTGGACATCCGAGTGCTGCGCATAGGCCCTGGTGATGTGCTTACCTTCTATGATGGGGATGACCTGACGGCCCGGGTTCTGGGCCAGTACTC
AGGGCCCCGTAGCCACTTCAAGCTCTTTACCTCCATGGCTGATGTCACCATTCAGTTCCAGTCGGACCCCGGGACCTCAGTGCTGGGCTACCAGCAGGGCTTCGTCATCCACT
TCTTTGAGGTGCCCCGCAATGACACATGTCCGGAGCTGCCTGAGATCCCCAATGGCTGGAAGAGCCCATCGCAGCCTGAGCTAGTGCACGGCACCGTGGTCACTTACCAGT
GCTACCCTGGCTACCAGGTAGTGGGATCCAGTGTCCTCATGTGCCAGTGGGACCTAACTTGGAGTGAGGACCTGCCCTCATGCCAGAGGGTGACTTCCTGCCACGATCCTGG
AGATGTGGAGCACAGCCGACGCCTCATATCCAGCCCCAAGTTTCCCGTGGGGGCCACCGTGCAATATATCTGTGACCAGGGTTTTGTGCTGATGGGCAGCTCCATCCTCACC
TGCCATGATCGCCAGGCTGGCAGCCCCAAGTGGAGTGACCGGGCCCCTAAATGTCTCCTGGAACAGCTCAAGCCATGCCATGGTCTCAGTGCCCCTGAGAATGGTGCCCGA
AGTCCTGAGAAGCAGCTACACCCAGCAGGGGCCACCATCCACTTCTCGTGTGCCCCTGGCTATGTGCTGAAGGGCCAGGCCAGCATCAAGTGTGTGCCTGGGCACCCCTCG
CATTGGAGTGACCCCCCACCCATCTGTAGGGCTGCCTCTCTGGATGGGTTCTACAACAGTCGCAGCCTGGATGTTGCCAAGGCACCTGCTGCCTCCAGCACCCTGGATGCTG
CCCAC**CTGGCCGGCCACAGATCT**GTCGAGTGCCCACCGTGCCCAGCACCACCTGTGGCAGGACCGTCAGTCTTCCTCTTCCCCCCAAAACCCAAGGACACCCTCATGATCTCC
CGGACCCCTGAGGTCACGTGCGTGGTGGTGGACGTGAGCCACGAAGACCCCGAGGTCCAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCC
ACGGGAGGAGCAGTTCAACAGCACGTTCCGTGTGGTCAGCGTCCTCACCGTTGTGCACCAGGACTGGCTGAACGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGGCCT
CCCAGCCCCCATCGAGAAAACCATCTCCAAAACCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCAGGGAGGAGATGACCAAGAACCAGGTCAGCCT
GACCTGCCTGGTCAAAGGCTTCTACCCCAGCGACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGACCACGCCTCCCATGCTGGACTCCGACG
GCTCCTTCTTCCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAA
GAGCCTCTCCCTGTCTCCGGGTTGA

FIG. 4A

>human SEZ6-Fc protein

(SEQ ID NO: 9)

METDTLLLWVLLLWVPGSTGD**GAPGS**LSLEAPTVGKGQAPGIEETDGELTAAPTPEQPERGVHFVTTAPTLKLLN
HHPLLEEFLQEGLEKGDEELRPALPFQPDPPAPFTPSPLPRLANQDSRPVFTSPTPAMAAVPTQPQSKEGPWSPES
ESPMLRITAPLPPGPSMAVPTLGPGEIASTTPPSRAWTPTQEGPGDMGRPWVAEVVSQGAGIGIQGTITSSTASG
DDEETTTTTTIITTTITTVQTPGPCSWNFSGPEGSLDSPTDLSSPTDVGLDCFFYISVYPGYGVEIKVQNISLREGETV
TVEGLGGPDPLPLANQSFLLRGQVIRSPTHQAALRFQSLPPPAGPGTFHFHYQAYLLSCHFPRRPAYGDVTVTSLH
PGGSARFHCATGYQLKGARHLTCLNATQPFWDSKEPVCIAACGGVIRNATTGRIVSPGFPGNYSNNLTCHWLLEA
PEGQRLHLHFEKVSLAEDDDRLIIRNGDNVEAPPVYDSYEVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEA
FQQGHCYEPFVKYGNFSSSTPTYPVGTTVEFSCDPGYTLEQGSIIIECVDPHDPQWNETEPACRAVCSGEITDSAG
VVLSPNWPEPYGRGQDCIWGVHVEEDKRIMLDIRVLRIGPGDVLTFYDGDDLTARVLGQYSGPRSHFKLFTSMA
DVTIQFQSDPGTSVLGYQQGFVIHFFEVPRNDTCPELPEIPNGWKSPSQPELVHGTVVTYQCYPGYQVVGSSVLM
CQWDLTWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYICDQGFVLMGSSILTCHDRQAGSPKWSD
RAPKCLLEQLKPCHGLSAPENGARSPEKQLHPAGATIHFSCAPGYVLKGQASIKCVPGHPSHWSDPPPICRAASLD
GFYNSRSLDVAKAPAASSTLDAAH**LAGHRS**VECPPCPAPPVAGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHED
PEVQFNWYVDGVEVHNAKTKPREEQFNSTFRVVSVLTVVHQDWLNGKEYKCKVSNKGLPAPIEKTISKTKGQPR
EPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPMLDSDGSFFLYSKLTVDKSRWQQ
GNVFSCSVMHEALHNHYTQKSLSLSPG

FIG. 4B

>cDNA sequence encoding mature mouse SEZ6 protein

(SEQ ID NO: 10)

CTCTCCTCAGAGGCTCCGATCACGGGGGAAGGTCATGCCACGGGCATCAGGGAGACGGATGGGGAGCTGACCGCAGCCCCTACACCTGAGCAGTCAGACC
GAGGCGTCCACTTCGTCACCACAGCCCCTACCCTCAAGCTGCTCAACCACCACCCACTTCTGGAAGAATTTCTTCAAGAGGGGCTAGAAAGAGAGGAAGCGC
CGCAGCCTGCACTGCCCTTCCAGCCGGACTCACCTACACACTTTACTCCAAGCCCCCTCCCCCGCCTCACCAACCAGGACAACCGCCCCGTCTTTACCAGTCCG
ACTCCAGCCGTGGCTGCAGCACCCACCCAGCCCCACTCCAGGGAGAAACCTTGGAACCTAGAATCCAAACCCCCTGAGCTTTCTATCACATCGTCCCTTCCTCC
AGGGCCGAGTATGGCAGTGCCCACACTGCTCCCAGAGGACAGACCCAGTACTACACCCCCTAGCCAAGCATGGACTCCAACTCAGGAGGGTCCTGGAGACA
TGGACAGACCTTGGGTTCCAGAGGTCATGTCTAAGACCACAGGGCTTGGTGTCGAGGGAACCATTGCCACCTCCACAGCTTCAGGGGATGACGAAGAGACC
ACTACCACCATCATTACCACTACTGTCACCACAGTTCAGCCACCAGGCCCCTGTAGCTGGAATTTCTCAGGCCCAGAGGGCTCTCTGGATTCCCCCACGGCCCC
CAGCTCACCCTCTGATGTTGGCCTGGACTGTTTCTACTATATCTCTGTCTACCCTGGATATGGAGTAGAGATCAAGGTGGAGAACATCAGCCTTCAGGAAGGG
GAGACCATCACCGTGGAGGGCCTGGGGGGCCCCGATCCACTGCCCTTGGCTAACCAGTCGTTCCTGCTGAGGGGCCAGGTCATCCGCAGCCCCACCCACCA
AGCAGCCCTGAGGTTCCAGAGCCTCCCGCTACCCGCTGGGCCTGGCACTTTCCATTTCCGCTACCAAGCCTATCTCCTGAGCTGCCACTTTCCCCGACGTCCAG
CGTATGGAGATGTGACTGTCACCAGTCTCCACCCAGGAGGCAGCGCCCACTTCCATTGTGCCACTGGCTACCAGCTCAAGGGTGCCAGGTTCCTCACCTGTCT
CAATGCCACCCAGCCCTTTTGGGATTCCCAAGAGCCTGTTTGCATTGCTGCTTGTGGTGGAGTGATTCGGAATGCCACCACTGGCCGCATTGTCTCTCCTGGC
TTCCCGGGGAACTACAGCAACAACCTCACCTGCCACTGGTTGCTAGAGGCTCCAGAGAGCCAGCGGCTGCACCTGCACTTTGAAAAGGTCTCCCTGGCAGAA
GACGACGACAGGCTCATCATCCGCAATGGAAATAACGTGGAGGCCCCGCCGGTGTACGACTCCTATGAGGTGGAATACCTGCCCATTGAGGGCCTGCTCAG
CTCTGGCAGACACTTCTTCGTGGAGTTCAGTACTGACAGCAGTGGGGCAGCTGCAGGCATGGCCCTGCGCTATGAGGCCTTCCAGCAAGGACATTGCTATGA
GCCCTTTGTCAAATACGGCAACTTCAGCAGCAGTGCACCGTCCTACCCTGTGGGTACAACTGTGGAGTTCAGCTGTGACCCTGGCTACACCCTGGAGCAGGG
CTCCATCATCATCGAATGCGTCGACCTCCACGACCCCCAGTGGAATGAGACAGAGCCAGCCTGCCGAGCCGTGTGCAGCGGGGAGATCACAGACTCTGCAG
GCGTGGTGCTCTCTCCAAACTGGCCGGAGCCTTATGGCCGAGGGCAGGACTGCATCTGGGGTGTGCATGTGGAGGAGGACAAGCGCATCATGCTGGACAT
CCGAGTGCTGCGCATAGGCTCTGGGGATGTACTGACCTTCTACGATGGGGATGACCTCACAGCCCGGGTCCTGGGCCAATACTCAGGGCCCCGTGGCCACTT
CAAGCTCTTTACCTCCATGGCCGATGTCACCATCCAGTTCCAGTCAGACCCTGGGACCTCGGCGCTGGGTTACCAGCAAGGATTTGTCATCCACTTCTTTGAG
GTTCCCCGCAACGACACATGTCCAGAGCTACCCGAGATCCCCAACGGCTGGAAGAACCCATCACAGCCTGAGCTGGTGCACGGCACGGTGGTCACCTATCAG
TGCTACCCTGGTTACCAGGTGGTGGGATCCAGTATTCTCATGTGCCAGTGGGACCTAAGCTGGAGTGAGGACCTGCCTTCATGCCAGAGAGTGACATCTTGC
CATGACCCAGGGGATGTGGAGCACAGCCGACGCCTCATATCCAGCCCCAAGTTTCCCGTGGGAGCAACTGTGCAATATGTCTGTGACCAGGGTTTTGTGCTG
ACGGGGAGTGCCATTCTCACCTGCCATGATCGGCAAGCAGGCAGTCCCAAGTGGAGTGACAGGGCCCCCAAGTGTCTCTTGGAACAATTCAAGCCGTGCCA
TGGCCTCAGCGCCCCGGAGAATGGTGCCCGCAGCCCTGAGAAGCGGCTTCACCCAGCAGGGGCCACCATCCACTTCTCCTGTGCCCCTGGTTATGTGCTGAA
GGGCCAGGCCAGCATCAAATGCGTGCCTGGACACCCCTCGCATTGGAGTGACCCACCACCCATCTGTAGGGCTGCCTCTCTGGATGGGTTCTACAACGGCCG
TAGCCTGGATGTTGCCAAGGCACCTGCCGCCTCCAGTGCCCTGGACGCTGCTCACCTGGCTGCTGCCATCTTCCTACCATTGGTGGCCATGGTGTTGCTGGTG
GGAGGAGTGTACCTCTATTTTTCCAGATTCCAGGGGAAAAGTCCCCTGCAACTTCCCCGAACTCATCCTCGCCCCTATAACCGCATCACGGTAGAGTCAGCAT
TTGACAATCCAACTTATGAGACTGGATCTCTTTCCTTTGCAGGAGACGAGAGAATATGA

FIG. 5A

>Translation of mouse SEZ6 ORF

(SEQ ID NO: 11)

LSSEAPITGEGHATGIRETDGELTAAPTPEQSDRGVHFVTTAPTLKLLNHHPLLEEFLQEGLEREEAPQPALPFQPDSPTHFT
PSPLPRLTNQDNRPVFTSPTPAVAAAPTQPHSREKPWNLESKPPELSITSSLPPGPSMAVPTLLPEDRPSTTPPSQAWTPT
QEGPGDMDRPWVPEVMSKTTGLGVEGTIATSTASGDDEETTTTIITTTVTTVQPPGPCSWNFSGPEGSLDSPTAPSSPSD
VGLDCFYYISVYPGYGVEIKVENISLQEGETITVEGLGGPDPLPLANQSFLLRGQVIRSPTHQAALRFQSLPLPAGPGTFHFR
YQAYLLSCHFPRRPAYGDVTVTSLHPGGSAHFHCATGYQLKGARFLTCLNATQPFWDSQEPVCIAACGGVIRNATTGRIVS
PGFPGNYSNNLTCHWLLEAPESQRLHLHFEKVSLAEDDDRLIIRNGNNVEAPPVYDSYEVEYLPIEGLLSSGRHFFVEFSTD
SSGAAAGMALRYEAFQQGHCYEPFVKYGNFSSSAPSYPVGTTVEFSCDPGYTLEQGSIIIECVDLHDPQWNETEPACRAV
CSGEITDSAGVVLSPNWPEPYGRGQDCIWGVHVEEDKRIMLDIRVLRIGSGDVLTFYDGDDLTARVLGQYSGPRGHFKLF
TSMADVTIQFQSDPGTSALGYQQGFVIHFFEVPRNDTCPELPEIPNGWKNPSQPELVHGTVVTYQCYPGYQVVGSSILMC
QWDLSWSEDLPSCQRVTSCHDPGDVEHSRRLISSPKFPVGATVQYVCDQGFVLTGSAILTCHDRQAGSPKWSDRAPKCLL
EQFKPCHGLSAPENGARSPEKRLHPAGATIHFSCAPGYVLKGQASIKCVPGHPSHWSDPPPICRAASLDGFYNGRSLDVAK
APAASSALDAAHLAAAIFLPLVAMVLLVGGVYLYFSRFQGKSPLQLPRTHPRPYNRITVESAFDNPTYE TGSLSFAGDERI

FIG. 5B

>cDNA sequence of rat SEZ6 ORF

(SEQ ID NO: 12)

ctctcctcagaggctccaatcacgggggaaggtcaagccacgggcatcagggagatggatggggagctgaccgcagcccctacacctgagcagtcagaccgaggcgtccacttcgtcaccac
agcccctaccctcaagctactcaaccaccacccacttctggaggaatttcttcaagaggggctagaagggagagaggaagctccgaggccggcactgcccttccagccagactcacctacac
cctttactccaagccccttccccgcctcaccaaccaggacaaccgccctgtctttaccagtccgacgccagctgtagctgcggcacccacgcagccccactccagaaagaaaccctggaacc
cagagtcagagcccccggagctttacatcacatctcccctccctccagggccgagtatggcagtgcccacactgcacccagaggacagacccagcactacacccccccagccaagcatggact
ccaacccaggagggtcctggagacatgggcagaccttgggttccagagatcatgtctaagaccacagggcttggtatcgaggggaccattgccacctccacagcttcaggggatgacgaaga
gaccaccaccaccaccatcattaccaccgtcaccacaattcagccaccaggcccctgtagctggaatttctcaggcccggagggctctctggattcccctgcggtccccagcgtcccctctgatg
ttggcctggactgtctctactacatctctgtctaccctggatatggagtcgagatcaaggtgaagaacatcagccttcaggaaggagagaccataaccgtggagggcctgggggggcctgacc
cactgcccttggctaaccagtctttcctgctgaggggccaggtcatccgcagccccacccaccaggcagccgtgaggttccaaagccttccacttcccgctggacctggtactttccatttccact
accaagcctatctcctgagctgccactttcctcggcgtccagcttatggagatgtgactgtcaccagcctccacccaggaggcagcgcccgcttccactgtgccactggctaccagctaaagggt
gccaggttcctcacctgtctcaatgccacccagccctttgggattcccaagagcctgtctgcattgctgcttgtggaggagtgattcggaatgccaccactggccgcattgtctctcctggctttcc
cgggaactacagcaacaacctcacctgccactggctgctagaagcccccgagagccagcggctgcacctgcactttgaaaaggtctccctggcagaagatgacgacaggctcatcatccgta
acgggaataacgtggaggccccgccagtgtatgactcctatgaggtggagtacctgcccattgagggcctgctcagttctggcagacacttcttcgtggagttcagtactgacagcagcggggc
agccgcaggcatggcactgcgctatgaggccttccagcaaggacattgctatgagccctttgtcaaatacggtaacttcagcagcagcgcaccgtcctaccctgtgggtacgactgtggagttc
agctgtgaccctggctacaccctggagcagggttccatcatcatcgaatgcgtcgacctccgtgacccccagtggaatgagacagaaccagcctgccgagccgtgtgcagcggggagatcac
agactctgcaggcgtggtgctctctccaaactggccggagccttatggccgagggcaggactgcatctggggtgtgcatgtggaggaggacaagcgcatcatgctggacatccgagtgctgcg
cataggctctggggatgtactgaccttctacgatggggatgacctgacagcccgggtcctgggccaatactcagggccccgtggccacttcaagctctttacctccatggctgatgtcaccattc
agttccagtcagaccctgggacgtcggcgctgggttaccagcaaggatttgtcatccacttctttgaggtgccccgcaatgacacatgtccagagcttcccgagatccccaacggctggaagaa
cccatcacagcctgagctggtgcatggcacggtggtcacctatcagtgctaccccggttaccaggtggtgggatccagtattctcatgtgccagtgggacctgagctggagtgaggacctgccct
catgccagagagtgacatcctgccatgacccaggggatgtggagcacagccgacgcctcatatccagcctcaagtttcctgtgggagcaactgtgcagtatatctgtgaccagggttttgtgctc
acgggtagcgccatccttacttgccatgatcgtcaagcgggcagtcccaagtggagtgacagggcccccaagtgtctcttggaacagttcaaaccatgtcatggcctcagtgcccctgagaatg
gtgcccgcagccctgagaagaggctccacccagcaggggccaccattcacttctcctgtgcccctggttatgtgctgaagggccaggccagcatcaaatgcgtgcctggacacccctcacattg
gagtgatcctccacccatctgtagggctgcttctctggatgggttctacaacggccgtagcctggatgttgccaaggcacctgccacctccagtgccctggatgctgcccacatggcagctgcca
tctttctaccattggtggccatggtgttgctggtgggaggagtgtacctctatttctccagactccagggaaaaagtcctctgcagcttcccggaactcatcctcgcccctataaccgtatcacggt
agagtcagcatttgacaatccaacttatgagaccggatctctttcctttgcaggagacgagagaata

FIG. 5C

>Translation of rat SEZ6 ORF

(SEQ ID NO: 13)

LSSEAPITGEGQATGIREMDGELTAAPTPEQSDRGVHFVTTAPTLKLLNHHPLLEEFLQEGLEGREEAPRPALPFQPDSPTPFTPS
PLPRLTNQDNRPVFTSPTPAVAAAPTQPHSRKKPWNPESEPPELYITSPLPPGPSMAVPTLHPEDRPSTTPPSQAWTPTQEGPG
DMGRPWVPEIMSKTTGLGIEGTIATSTASGDDEETTTTTIITTVTTIQPPGPCSWNFSGPEGSLDSPAVPSVPSDVGLDCLYYISV
YPGYGVEIKVKNISLQEGETITVEGLGGPDPLPLANQSFLLRGQVIRSPTHQAAVRFQSLPLPAGPGTFHFHYQAYLLSCHFPRRP
AYGDVTVTSLHPGGSARFHCATGYQLKGARFLTCLNATQPFWDSQEPVCIAACGGVIRNATTGRIVSPGFPGNYSNNLTCHWL
LEAPESQRLHLHFEKVSLAEDDDRLIIRNGNNVEAPPVYDSYEVEYLPIEGLLSSGRHFFVEFSTDSSGAAAGMALRYEAFQQGH
CYEPFVKYGNFSSSAPSYPVGTTVEFSCDPGYTLEQGSIIIECVDLRDPQWNETEPACRAVCSGEITDSAGVVLSPNWPEPYGRG
QDCIWGVHVEEDKRIMLDIRVLRIGSGDVLTFYDGDDLTARVLGQYSGPRGHFKLFTSMADVTIQFQSDPGTSALGYQQGFVI
HFFEVPRNDTCPELPEIPNGWKNPSQPELVHGTVVTYQCYPGYQVVGSSILMCQWDLSWSEDLPSCQRVTSCHDPGDVEHS
RRLISSLKFPVGATVQYICDQGFVLTGSAILTCHDRQAGSPKWSDRAPKCLLEQFKPCHGLSAPENGARSPEKRLHPAGATIHFSC
APGYVLKGQASIKCVPGHPSHWSDPPPICRAASLDGFYNGRSLDVAKAPATSSALDAAHMAAAIFLPLVAMVLLVGGVYLYFSR
LQGKSPLQLPGTHPRPYNRITVESAFDNPTYETGSLSFAGDERI

FIG. 5D

>cDNA sequence of cynomolgus SEZ6 ORF

(SEQ ID NO: 14)

atggagacagacacactcctgctatgggtactgctgtctgggttccaggttccactggtgacggcgccactcagcagcgaagctcccacaatgggcaagggacaggccccccggaattgaagaaaccgatggcgaactcaccgctgcccctaccccctgagcaacccgaaagggagtgcacttgtgaccaccgctcccacctgaagctgctcaatcaccacccctcctgaggagtttctgcaggaaggcctggaaaaaggcgacgaggaactcagacctgccctgcccttccaaccccgacccctcctaccccctttacacctagccctctcccctagactggccaaccaagactccagacctgtgttcaccagccctacacctgctacagctgccgtccctacccaacctcaatccaaggagggacctggagcctccgctgctgagaatcacagctcctcctcctcctggccctccatggctgtcccccacactcggacctggcgaaaggcccagcacaacacccccctccagaggcctggcccctacacaagaaggcccctggcgacatgggaaggccttgggtccctgaagtcgtgagccaaggcgccgcatcggaatccaggaaccatcgccagctccacagccaggagacgatgaggaaacaaccaccacaacaccatcacacaatcacagtccagaccccgccccttgcagctggaatttttccgccctgaggaatcctggatttcccccacagatctgtcctcccctcctgacgtggcctgactgtttcttctatatctccgtgtatcctggctacggcgtcgaaatcaaagtccagaacatctccctgaggaaggcgaaacagtcaccgtggaaggactggcggaacccgctcctcctgcctcctgccaacccaatcctttcctcctcaggggccaagtgattagatcccccacacatcaagctgctctcaggttccaaagcctcccctcccccgctggaccccggaaccttcacttccatctacctacccaaggcctcgctatctcctcagctgccatttcccccacaggcccgcttatggagatgtcagtgtcacctcccctgcatcctggcgctccgctagattccactgcgctaccggataccaactcaagggcgccaggcatctgacatgtctcaatgctaccccagccccttctggacagcaagatcatgtcagtcacctcccctgcatcctggcgctccgctagattccactgcgctaccggataccaactcaagggcgccaggcatctgacatgtctcaatgctaccccagccccttctggacagcaggagcccgtctgcattgccgcttgcggaggcgtcatcagaaatgccaccaccggcagaatcgtgagccccggcttccctggcaactactccaacaacctgacatgccactggctgccaccttctggaagctcagcctgccgaaagatgacgacagactcatcatcaggaacggcgacaacgtggaggctccccccgtctatgattcctacgagggtcgagtacctcccatcgaggagactgctgtcctcggcaagcatttttttcgtggagctgtccacagattccagcggaagctgccgccggaatggcttctcaggtacgaggcttccaacagggccactgttacgagccctttgtgaagtacggcaacttctccagctcctcctaccccgtcggcacaaccgtcgaatttagctgcgaccctggatacacactcgatcatcgagtgtcgaccccacgaccccaatgggaacagagacccagtgctgcctgcccgaactgccccgagattcccaacgggctgggaaatcccccctcccaacctgatcgtgcacggcaccgtcgtcacctaccaatgctacctggatacccaagtcgtgcagcagcgtgctgtatgccaatgcgaccctgcctcctcccctgccagaggatcacctcctgccacgatccgcgatgtggaacactcagaggctgattatttccctgtgcccctcacagccacttcaagctgttcaccagcatggctgaccatccagttccagtccgatctcggatcctggaatacgacgtcgtcacctaccaatctcttgatccacttcttcgaggtcccccaggaacgacacctgcccgaactgccccgagattcccaacgggctgggaaatcccccctcccaacctgatcgtgcacggcaccgtcgtcacctaccaatgctacctggatacccaagtcgtgcagcagcgtgctgtatgccaatgcgaccctgcctcctcccctgccagaggatcacctcctgccacgatccgcgatgtggaacactccaggaggctgattagctcccccaagttccctgtgcccggacaatacatctgcgacccaggaacccagcatcctcacatgccacgacaggcaagctggatcccccaagtggtcgataggggccccccaaatgcctcctggaacagctgaaggccttgtcatggcctcaggctcctgaaaacgggcctagggagccccgaaaagaggctccacccctgccggagccacatccactttcctgtgcccccggatacgtctgaaggccaggcctccattaagtgcgtgcccggacatcttcccactggtccgaccccctcccatcctgtaaagccgcctcctccctggacggattctatacacagcagaagcctggacgtgctcttcctcaccctggatgctcacatcgctgctgccatggtgctgctggtgggaggcgtctacttccactctccaggctgcagggaaagagctccctgcaactgcctaggacaagacccaggccctacaataggatcacagtcgagagcgccttcgacaaccccacatacgagacaggatccctgagctttgccggagacgagaagaatt

FIG. 5E

>Translation of cynomolgus SEZ6 ORF

(SEQ ID NO: 15)

METDTLLLWVLLLWVPGSTGDGAPLSSEAPTMGKGQAPGIEETDGELTAAPTPEQPER
GVHFVTTAPTLKLLNHHPLLEEFLQEGLEKGDEELRPALPFQPDPPTPFTPSPLPRLANQ
DSRPVFTSPTPATAAVPTQPQSKEGPWSLESEPPVLRITAPLPPGPSMAVPTLGPGERPS
TTPPSRAWTPTQEGPGDMGRPWVPEVVSQGAGIGIQGTIASSTASGDDEETTTTTTIITT
TITTVQTPGPCSWNFSGPEGSLDSPTDLSSPPDVGLDCFFYISVYPGYGVEIKVQNISLR
EGETVTVEGLGGPAPLPLANQSFLLRGQVIRSPTHQAALRFQSLPPPAGPGTFHFHYQAY
LLSCHFPHRPAYGDVTVTSLHPGGSARFHCATGYQLKGARHLTCLNATQPFWDSKEPVCI
AACGGVIRNATTGRIVSPGFPGNYSNNLTCHWLLEAPEGQRLHLHFEKVSLAEDDDRLII
RNGDNVEAPPVYDSYEVEYLPIEGLLSSGKHFFVELSTDSSGAAAGMALRYEAFQQGHCY
EPFVKYGNFSSSAPTYPVGTTVEFSCDPGYTLEQGSIIIECVDPHDPQWNETEPACRAVC
SGEITDSAGVVLSPNWPEPYGRGQDCIWGVHVEEDKRIMLDVRVLRIGPGDVLTFYDGDD
LTARVLGQYSGPHSHFKLFTSMADVTIQFQSDPGTSVLGYQQGFVIHFFEVPRNDTCPEL
PEIPNGWKSPSQPDLVHGTVVTYQCYPGYQVVGSSVLMCQWDLTWSEDLPSCQRVTSCHD
PGDVEHSRRLISSPKFPVGATVQYICDQGFVLTGTSILTCHDRQAGSPKWSDRAPKCLLE
QLKPCHGLSAPENGARSPEKRLHPAGATIHFSCAPGYVLKGQASIKCVPGHPSHWSDPPP
ICKAASLDGFYNSRSLDVAKAPAASSTLDAAHIAAAIFLPLVAMVLLVGGVYFYFSRLQG
KSSLQLPRTRPRPYNRITVESAFDNPTYETGSLSFAGDERI

FIG. 5F

>cDNA sequence of human SEZ6L ECD

(SEQ ID NO: 16)

ctcgagagggatgctctgcctgagggagatgcttcccctctcggaccttatctgctgcccagcggagctcctgagaggggatcccccggaaaggagcatcccgaagaaagagtggtcacagct
ccccctagctccagccagagcgctgaggtgctgggagaactggtcctcgacggaacagccccttccgcccatcacgatattcctgccctcagccctctcctccccgaggaagctaggcctaaac
acgccctcccccctaaaaagaagctgccttccctcaagcaggtcaattccgccaggaagcagctcagacccaaggccacctccgctgctacagtccaaagagctggatcccagcctgccagc
cagggactcgatctgctcagcagctccacagaaaaacctggacctcctggcgatcctgaccctattgtggccagcgaagaagctagcgaagtccctctgtggctggacaggaaggagtccgct
gtccccaccacacccgctcctctccagatcagcccttcacctcccagccttatgtcgctcatacactgcctcagaggcctgagcctggcgaacctggacctgacatggctcaggaggctcctca
ggaggacaccagccctatggccctgatggataagggcgagaatgaactgaccggaagcgccagcgaggaaagccaggagaccaccaccagcacaatcatcaccaccaccgtcatcaccac
cgaacaggcccccgctctgtgttccgtgtccttttccaaccccgagggctacattgacagcagcgattacccccctgctccctctcaacaacttcctcgagtgcacctacaatgtgaccgtgtacac
cggctacggagtcgaactccaggtgaagtccgtgaacctctccgatggcgaactgctctccattaggggcgtcgatggccctacactcaccgtcctggctaaccaaaccctgctcgtcgaaggc
caggtgattaggtcccccaccaacaccatctccgtctacttcaggacctttcaagacgacggactgggaaccttccaactgcattaccaggccttcatgctgtcctgtaatttccccaggagaccc
gactccggagacgtcaccgtcatggatctgcactccggaggcgtggcccactttcattgtcacctcggctacgagctccagggcgccaagatgctgacatgcatcaacgccagcaaacctcact
ggtccagccaggagcctatctgtagcgctccttgcggcggagccgtgcacaatgctacaattggcagagtgctcagcccttcctaccctgaaaacaccaacggctcccagttctgcatctggac
aatcgaggcccccgaaggccaaaagctgcacctgcactttgagaggctcctgctccacgacaaagacaggatgaccgtgcactccggccagaccaataagtccgccctcctgtatgacagcc
tgcagacagagtccgtccctttttgaaggcctgctgtccgagggcaataccatcaggattgagttcacatccgaccaagccagggctgctagcaccttcaacattaggtttgaggctttcgaaaag
ggacactgctacgagccctatattcagaatggcaatttcacaacctccgaccccacctacaatatcggcacaattgtggagtttacctgcgaccctggacacagcctggagcagggacctgcca
tcatcgaatgcatcaacgtcagggacccctactggaacgacacagaacctctgtgtagggctatgtgcggaggcgaactgagcgctgtggctggagtcgtgctctcccctaactggcccgaac
cctatgtggagggcgaagattgcatctggaagatccacgtcggcgaggaaaaaaggatctttctggacatccagttcctgaatctctccaacagcgacatcctgaccatctacgacggagatga
ggtcatgccccacattctgggccagtatctcggaaactccggcccccaaaagctctactcctccacccccgacctcacaatccaattccacagcgatcctgctggcctcatctttggaaaggggac
aaggctttatcatgaattacatcgaggtcagcagaaacgacagctgctccgacctgcctgagatccagaacggatggaagaccacctcccacaccgagctcgtcaggggagctaggatcaca
taccagtgcgaccccggatacgacatcgtcggctccgataccctgacatgccagtgggatctgagctggagctccgacccccccttttgtgagaagatcatgtactgcaccgaccccggcgaag
tcgatcatagcaccaggctcatcagcgatcctgtgctgctcgtcggcacaaccatccaatacacctgtaaccccggattcgtgctcgaaggatcctccctgctcacctgttacagcagggaaacc
ggcaccccatttggacatccaggctgcctcactgcgtgtccgaagagagcctggcttgcgataatcccggcctgcctgagaacggataccagattctgtacaaaaggctgtacctccccggcg
agtccctgaccttcatgtgctacgaaggattcgagctcatgggcgaagtcaccatcaggtgcatcctcggccagccctcccactggaacggacctctccccgtctgtaaggtcaatcaggattcc
ttcgagcacgctctggaagtcgctgaggctgccgccgagacaagcctggaaggcggc

FIG. 5G

>human SEZ6L ECD protein

(SEQ ID NO: 17)

METDTLLLWVLLLWVPGSTGDHGAPLERDALPEGDASPLGPYLLPSGAPERGSPGKEHPEERVVT
APPSSSQSAEVLGELVLDGTAPSAHHDIPALSPLLPEEARPKHALPPKKKLPSLKQVNSARKQLRPK
ATSAATVQRAGSQPASQGLDLLSSSTEKPGPPGDPDPIVASEEASEVPLWLDRKESAVPTTPAPLQI
SPFTSQPYVAHTLPQRPEPGEPGPDMAQEAPQEDTSPMALMDKGENELTGSASEESQETTTSTII
TTTVITTEQAPALCSVSFSNPEGYIDSSDYPLLPLNNFLECTYNVTVYTGYGVELQVKSVNLSDGELL
SIRGVDGPTLTVLANQTLLVEGQVIRSPTNTISVYFRTFQDDGLGTFQLHYQAFMLSCNFPRRPDS
GDVTVMDLHSGGVAHFHCHLGYELQGAKMLTCINASKPHWSSQEPICSAPCGGAVHNATIGRV
LSPSYPENTNGSQFCIWTIEAPEGQKLHLHFERLLLHDKDRMTVHSGQTNKSALLYDSLQTESVPF
EGLLSEGNTIRIEFTSDQARAASTFNIRFEAFEKGHCYEPYIQNGNFTTSDPTYNIGTIVEFTCDPGH
SLEQGPAIIECINVRDPYWNDTEPLCRAMCGGELSAVAGVVLSPNWPEPYVEGEDCIWKIHVGEE
KRIFLDIQFLNLSNSDILTIYDGDEVMPHILGQYLGNSGPQKLYSSTPDLTIQFHSDPAGLIFGKGQG
FIMNYIEVSRNDSCSDLPEIQNGWKTTSHTELVRGARITYQCDPGYDIVGSDTLTCQWDLSWSSD
PPFCEKIMYCTDPGEVDHSTRLISDPVLLVGTTIQYTCNPGFVLEGSSLLTCYSRETGTPIWTSRLPH
CVSEESLACDNPGLPENGYQILYKRLYLPGESLTFMCYEGFELMGEVTIRCILGQPSHWNGPLPVC
KVNQDSFEHALEVAEAAAETSLEGGLAGHHHHHHHHH

FIG. 5H

>cDNA sequence of human SEZ6L2 ECD

(SEQ ID NO: 18)

ctgcctctcaaagaggaagagattctccccgagcccggatccgagacacccacagtggcttccgaagccctcgctgaactgctgcacggagccctcctgagaaaggggacctgaaatgggcta
tctccctggctccgacagagatcccacactcgccacacctcctgctggacagaccctcgctgtgccttccctgcccagagccacagaacccggaacaggccctctcacaacagctgtgacccct
aacggcgtcagaggagctggacctacagcccctgagctgctgacacctcctcctggcacaaccgctcctcctcctccttcccctgctagccctggacccctctcggacctgaaggaggcgagg
aggagacaaccaccaccattattaccaccaccaccgtgacaaccacagtgaccagccctgtcctgtgcaacaacaacatcagcgaaggcgaaggctatgtggaatcccctgacctgggctcc
cctgtgtccagaacactcggcctcctggattgcacatactccattcacgtgtaccccggctacggaatcgagattcaggtgcagaccctgaatctgtcccaggaggaggaactgctggtgctgg
ctggcggaggaagccctggcctcgctcctagactcctcgctaactcctccatgctcggcgaaggccaggtcctcagatcccctaccaacaggctgctcctgcacttccagagccccagagtgcc
tagaggaggcggcttcaggattcactaccaggcctatctcctgagctgtggattcccctcccagacccgctcatggcgatgtctccgtcaccgacctccaccccggaggaacagccaccttccact
gtgattccggataccagctgcaaggcgaggagaccctgatttgcctcaatggcaccaggcccagctggaacggagagacacctagctgcatggctagctgcggcggaaccatccataatgcc
accctcggcaggatcgtcagccctgaacctggcggagctgtgggacctaacctcacatgcagatgggtgatcgaagctgctgaaggcaggagactccacctccacttcgagagggtgtccctg
gacgaggacaacgacaggctcatggtcagaagcggcggaagccctctcagccctgtgatttacgacagcgacatggacgatgtgcctgagaggggcctcatctccgatgcccaaagcctgta
cgtggaactcctctccgagacccccgctaacccctcctcctgagcctcagattcgaggccttcgaggaggacagatgtttcgctccttttctggcccatggcaacgtgaccacaaccgaccccg
agtacagacccggagctctggctaccttcagctgtctgcctggctacgccctcgaacctcccggacctcctaatgccatcgaatgtgtggatcccaccgaaccccattggaacgacaccgagcc
cgcttgtaaggctatgtgcggcggagaactcagcgaacctgccggagtggtcctctcccctgattggccccagagctattcccccggacaagactgtgtctggggcgtgcacgtccaggagga
aaagaggatcctcctccaggtggagattctgaacgtcagagagggagacatgctgaccctgttcgacggagacggaccttccgccagagtcctcgctcagctgagaggccctcagcccagaa
ggagactgctcagctccggccccgatctgacactccagtttcaggcccccccctggcccccctaatcctggcctgggacagggcttcgtgctccacttcaaggaggtccccaggaatgatacatg
ccccgaactgcctcctcccgagtggggatggaggacagcttcccatggcgacctgatcaggggaaccgtgctgacatatcagtgtgaacccggctacgagctgctgggaagcgatatcctgac
ctgtcagtgggatctctcctggagcgctgctccccctgcctgtcagaaaatcatgacctgcgctgaccctggagagatcgctaacggccacaggaccgcttccgacgctggatttcccgtgggct
cccacgtgcaatacaggtgcctccccggatactccctcgaaggcgctgccatgctgacatgctacagcagggacaccggcacacccaagtggtccgacagggtgcccaaatgtgctctgaagt
acgagccctgtctcaatcccggagtgcccgagaacggataccagaccctgtacaagcaccactatcaggccggcgaatccctgagattcttctgctacgagggcttcgagctcatcggcgagg
tgacaattacctgtgtgcccggccatccttcccagtggaccagccagccccctctctgtaaggtcgcctacgaagagctgctcgacaataggaagctggaggtcacccagaccaccgacccttc
cagacaactggaaggcggc

FIG. 5I

>human SEZ6L2 ECD protein

(SEQ ID NO: 19)

METDTLLLWVLLLWVPGSTGDGAPLPLKEEEILPEPGSETPTVASEALAELLHGALLRRGPEMGYL
PGSDRDPTLATPPAGQTLAVPSLPRATEPGTGPLTTAVTPNGVRGAGPTAPELLTPPPGTTAPPPPS
PASPGPPLGPEGGEEETTTTIITTTTVTTTVTSPVLCNNNISEGEGYVESPDLGSPVSRTLGLLDCTY
SIHVYPGYGIEIQVQTLNLSQEEELLVLAGGGSPGLAPRLLANSSMLGEGQVLRSPTNRLLLHFQSP
RVPRGGGFRIHYQAYLLSCGFPPRPAHGDVSVTDLHPGGTATFHCDSGYQLQGEETLICLNGTRPS
WNGETPSCMASCGGTIHNATLGRIVSPEPGGAVGPNLTCRWVIEAAEGRRLHLHFERVSLDEDN
DRLMVRSGGSPLSPVIYDSDMDDVPERGLISDAQSLYVELLSETPANPLLLSLRFEAFEEDRCFAPF
LAHGNVTTTDPEYRPGALATFSCLPGYALEPPGPPNAIECVDPTEPHWNDTEPACKAMCGGELSE
PAGVVLSPDWPQSYSPGQDCVWGVHVQEEKRILLQVEILNVREGDMLTLFDGDGPSARVLAQL
RGPQPRRRLLSSGPDLTLQFQAPPGPPNPGLGQGFVLHFKEVPRNDTCPELPPPEWGWRTASH
GDLIRGTVLTYQCEPGYELLGSDILTCQWDLSWSAAPPACQKIMTCADPGEIANGHRTASDAGFP
VGSHVQYRCLPGYSLEGAAMLTCYSRDTGTPKWSDRVPKCALKYEPCLNPGVPENGYQTLYKHH
YQAGESLRFFCYEGFELIGEVTITCVPGHPSQWTSQPPLCKVAYEELLDNRKLEVTQTTDPSRQLEG
GLAGHHHHHHHHH

FIG. 5J

Relative Expression Values for mRNA Transcripts Associated With Neuroendocrine Tumors in NTX Lines using Whole Transcriptome Sequencing

	DLL1	DLL3	DLL4	NOTCH1	NOTCH2	NOTCH3	NOTCH4	ASCL1	NCAM1	CHGA	HES1	HES6	HEY1
LU37p3 - LCNEC	86.2	93.7	4.5	0.1	14.4	7.8	0.7	2690.8	72.0	94.0	2.7	55.1	5.6
LU64p2 - SCLC	10.9	34.3	10.8	8.2	0.2	0.7	5.7	418.4	57.8	729.5	6.3	2605.8	2.0
LU73p1 - SCLC	176.1	227.6	16.6	4.2	0.0	33.0	79.7	3429.1	77.5	515.0	34.5	3270.6	33.9
LU86p3 - SCLC	4.7	11.9	12.2	18.7	176.8	14.5	0.5	0.4	294.9	17.7	13.9	285.2	9.9
LU95p2 - SCLC	2.4	16.0	1.6	2.1	0.4	8.5	12.2	273.2	171.5	18.2	2.8	72.6	9.3
LU137p0 -LU_Ad	1.8	0.0	4.3	10.6	247.7	27.5	0.4	0.0	0.0	0.0	54.6	1.5	1.7
LU146p0 - LU_Ad	0.0	0.0	0.3	5.6	56.8	37.9	3.9	0.0	0.8	0.0	42.8	0.8	0.3
LU153p0 - LU_Ad	0.8	0.0	5.7	8.1	195.1	8.0	6.5	0.2	4.4	0.0	4.8	0.2	1.4
LU49p4 – LU_SCC	2.6	0.7	0.0	7.6	104.2	0.0	1.3	0.0	0.0	0.0	62.1	4.3	0.0
LU70p4 - LU_SCC	4.7	0.0	0.8	12.6	123.2	1.8	0.1	0.0	0.0	0.3	42.3	2.1	0.0
LU76p5 - LU_SCC	0.8	0.0	4.8	20.0	32.5	0.1	0.0	3.4	0.3	0.3	23.0	0.8	0.0
OV26p3 - OV	34.2	65.4	15.7	0.0	101.0	17.4	0.6	2253.7	128.8	23.1	4.3	35.1	7.1
OV100p0 - OV	0.0	0.5	0.4	3.6	154.2	16.3	0.5	0.0	2.0	0.0	84.1	0.0	17.3
OV45p3 - OV	1.7	1.9	0.1	14.9	53.2	84.5	2.7	0.0	60.4	0.1	14.6	2.4	64.4
OV55p5 - OV	0.3	0.2	0.0	31.0	139.8	71.7	1.4	0.0	11.4	0.0	19.4	1.9	6.7
OV72METp0 - OV	0.0	0.1	0.2	1.6	303.1	46.8	0.2	0.3	34.5	0.1	17.1	1.9	2.0
OV91METp0 - OV	0.3	1.6	0.1	10.5	340.1	345.3	2.3	0.0	3.9	0.0	31.7	1.2	1.0
Normal Lung 1	1.7	0.0	5.7	8.2	85.9	33.1	11.4	0.4	3.4	0.0	13.8	0.1	11.4
Normal Lung 2	17.0	0.1	8.8	24.0	81.5	54.0	62.8	5.3	4.6	0.4	23.2	2.4	43.0
Normal Lung 3	26.9	0.2	41.6	146.0	25.6	239.3	91.7	0.8	1.8	1.3	11.9	8.1	40.2
Normal Lung 4	0.2	0.0	6.0	11.8	81.5	40.4	15.8	0.0	1.2	0.0	11.4	0.3	14.1
Normal Ovary	0.3	0.0	5.1	7.8	250.9	44.1	5.1	0.6	125.5	0.2	8.5	0.7	0.4

FIG. 6A

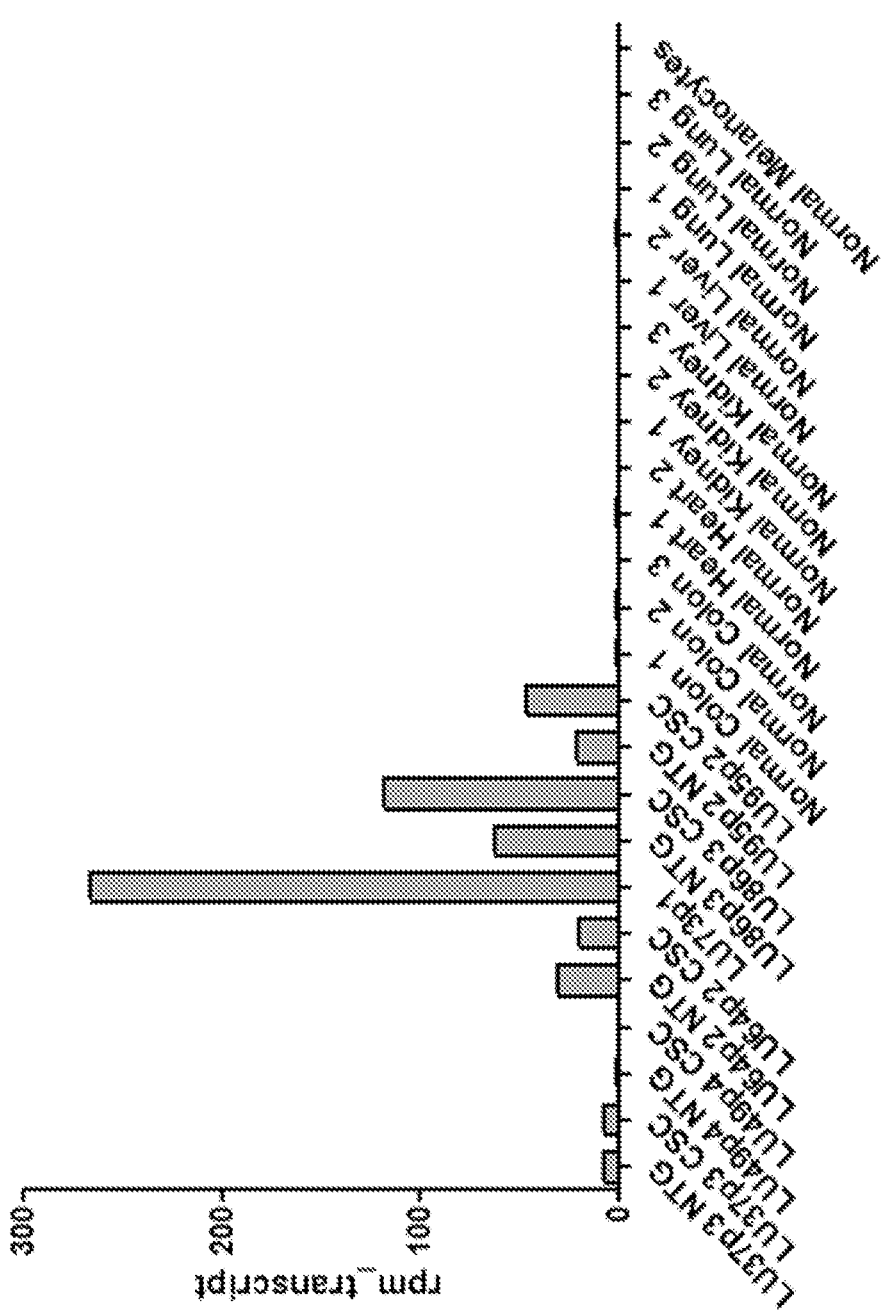

Relative Expression Values For SEZ6 Transcripts in Various Samples as Determined by Whole Transcriptome Sequencing
rpm_transcript
0
100
200
300
LU37P3 NTG
LU37P3 CSC
LU49P4 NTG
LU49P4 CSC
LU64P2 NTG
LU64P2 CSC
LU73P1
LU86P3 NTG
LU86P3 CSC
LU95P2 NTG
LU95P2 CSC
Normal Colon 1
Normal Colon 2
Normal Colon 3
Normal Heart 1
Normal Heart 2
Normal Kidney 1
Normal Kidney 2
Normal Kidney 3
Normal Liver 1
Normal Liver 2
Normal Lung 1
Normal Lung 2
Normal Lung 3
Normal Melanocytes

FIG. 6B

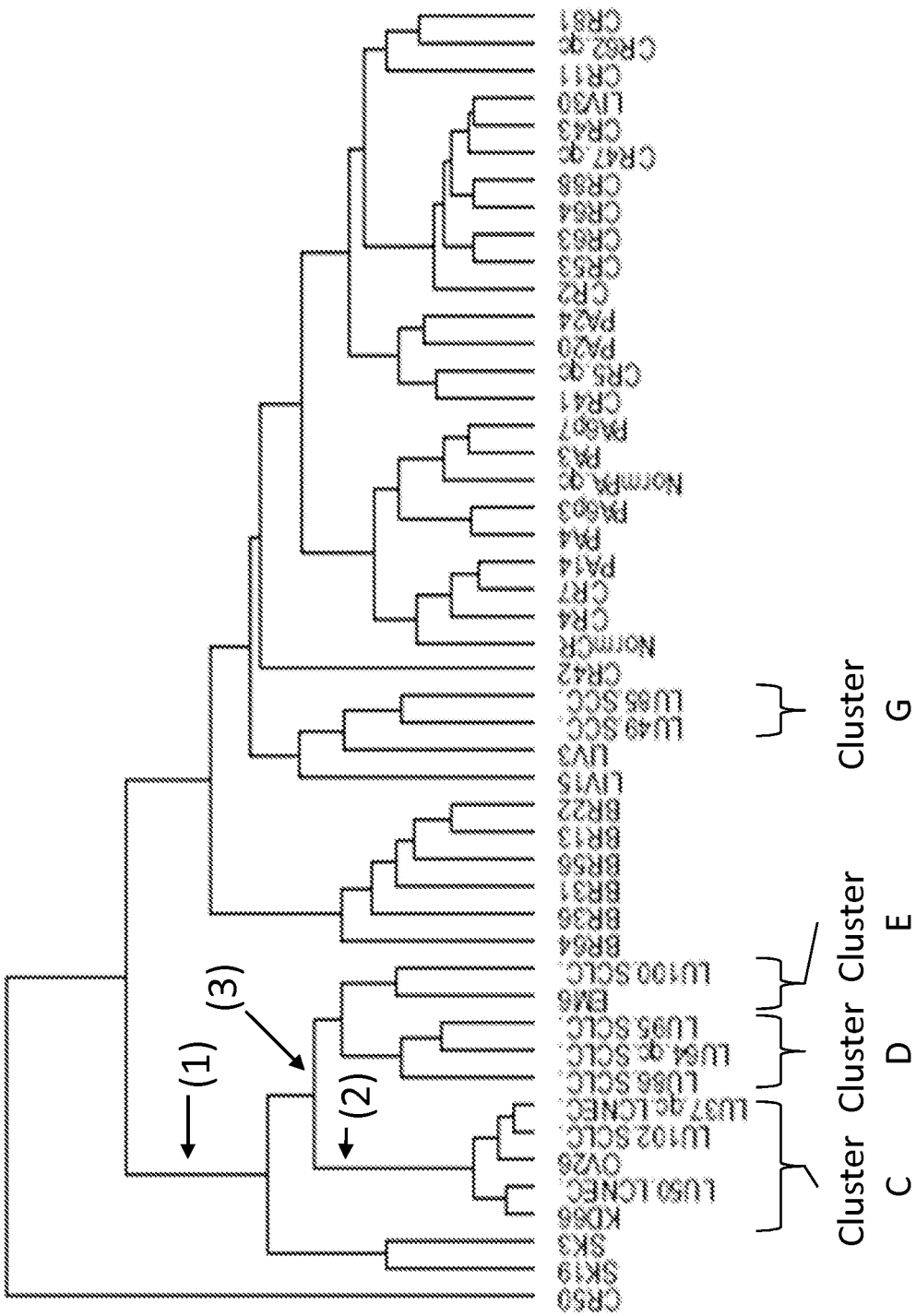

Microarray Data Showing Clusters
of Tumors with Neuroendocrine Features
(1)
(2)
(3)
Cluster C
Cluster D
Cluster E
Cluster G

FIG. 7A

Average Normalized Intensity Values for Common Markers of Neuroendocrine Phenotype

			Cluster C					Cluster D			Cluster E		Cluster G	
	Gene Symbol	Median (48 samples)	KD66	LU50(LCNEC)	OV26	LU102(SCLC)	LU37-qc(LCNEC)	LU86(SCLC)	LU64-qc(SCLC)	LU95(SCLC)	EM6	LU100(SCLC)	LU49(SCC)	LU85(SCC)
Achaete-scute complex homolog 1	ASCL1	9	6589	8238	9382	[illegible]	9664	11	3390	[illegible]	14	261	8	5
Calcitonin	CALCA	73	[illegible]	8352	[illegible]	[illegible]	[illegible]	70	24	2477	53	45	52	39
CGRP	CALCB	143	2534	1147	1547	2584	2757	[illegible]	433	1264	309	135	65	81
CD117, Kit receptor	KIT	343	5978	4907	3561	6416	6254	[illegible]	[illegible]	[illegible]	712	948	34	301
Chromogranin A	CHGA	53	6167	8902	[illegible]	8206	7408	7950	[illegible]	[illegible]	9726	4378	1249	2364
Chromogranin B	CHGB	22	1615	2152	1516	1456	1242	2365	1362	4151	4656	1833	32	24
Dopa decaroxylase	DDC	2441	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1498	4234	9297	85	334	134	286
Gamma (Neural) Enolase	ENO2	1910	2054	1881	1911	1573	1262	4043	4737	[illegible]	6394	1824	2472	2241
GDNF family receptor alpha 1	GFRA1	9	263	29	37	146	133	90	4	6	77	47	9	4
CD56	NCAM1	82	551	875	801	999	727	2618	2519	3296	361	2899	425	106
PGP9.5	UCHL1	415	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9749	[illegible]	7789	4249	122	8251
Proopiomelanocortin	POMC	94	751	427	590	750	657	66	560	5204	68	84	213	160
Somatostatin	SST	67	[illegible]	1316	[illegible]	5869	[illegible]	35	9	62	1992	3613	90	28
Somatostatin Receptor 5	SSTR5	613	733	906	875	636	633	907	344	622	916	662	918	401
Synaptophysin	SYP	19	15	15	9	17	15	27	53	91	49	19	11	19
TTF1	NKX2-1	18	3137	3508	2734	5180	3315	1258	3585	2229	27	311	85	8

FIG. 7B

Average Normalized Intensity Values for Selected Genes in the Notch Pathway and ASCL1

		Cluster C					Cluster D			Cluster G	
	Median (48 samples)	KD66	LU50(LCNEC)	OV26	LU102(SCLC)	LU37(LCNEC)	LU86(SCLC)	LU64(SCLC)	LU95(SCLC)	LU49(SCC)	LU85(SCC)
ASCL1	9	6589	8238	9382	12169	9664	11	3390	10298	8	5
DLL1	51	348	565	406	497	179	218	98	514	29	120
DLL3	350	4584	3985	6232	5884	5233	1686	3137	5814	601	492
DLL4	614	601	445	592	301	280	763	198	673	357	469
HES1	670	128	129	160	92	82	551	137	335	2665	2024
HES6	117	196	361	481	416	279	5456	2716	3535	28	33
HEY1	89	86	101	116	103	77	1660	680	2502	3776	231
HEYL	87	157	132	128	148	132	2645	102	267	333	80
JAG1	630	159	114	110	95	111	743	521	311	9131	678
JAG2	125	335	529	398	420	247	324	513	611	159	153
NOTCH1	666	34	23	41	17	14	1039	381	202	4720	438
NOTCH2	26	6	11	12	16	12	105	11	1	37	5
NOTCH3	101	13	27	91	81	72	302	37	136	1474	322
NOTCH4	14	6	7	13	9	5	14	15	69	14	7
RBPJ	1289	1891	2255	1933	2717	2278	4502	2678	5167	1226	1029

FIG. 7C

Expression of HES6 mRNA in Neuroendocrine Tumors Derived by qRT-PCR

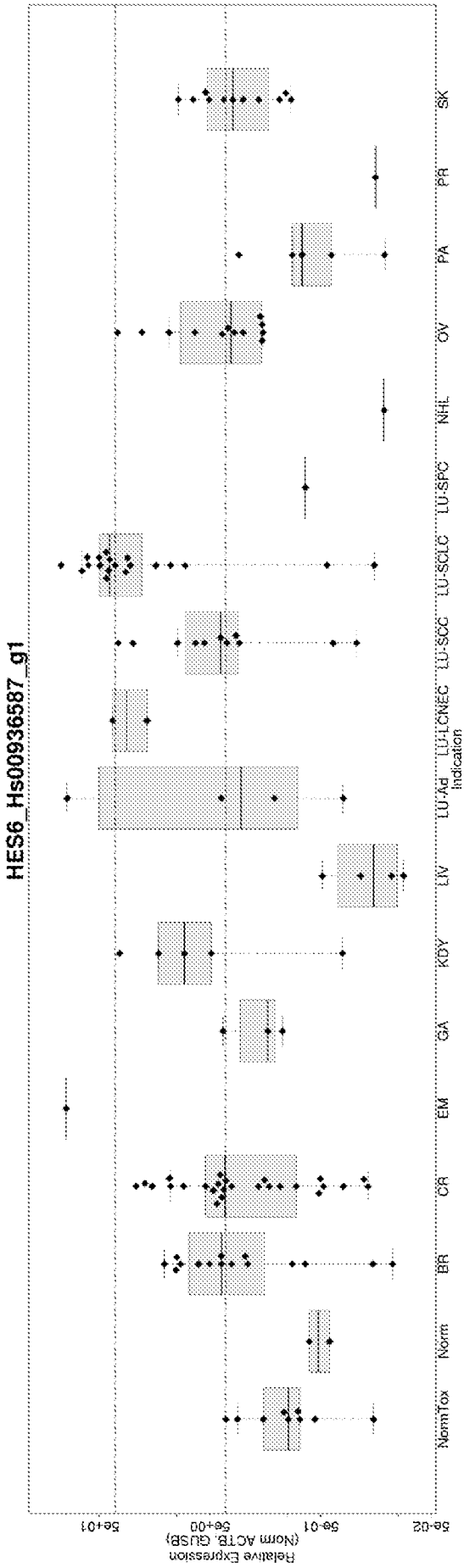


FIG. 7D

Levels of Selected Genes Linked To Neural Phenotypes

	Gene Symbol	Median (48 samples)	Cluster C					Cluster D			Cluster E		Cluster G	
			KD66	LU50 (LCNEC)	OV26	LU102 (SCLC)	LU37 (LCNEC)	LU86 (SCLC)	LU64 (SCLC)	LU95 (SCLC)	EM6	LU100 (SCLC)	LU49 (SCC)	LU85 (SCC)
Achaete-scute complex homolog 1	ASCL1	9	6589	8238	9382	[illegible]	9664	11	3390	[illegible]	14	261	8	5
Brain-expressed X-linked protein 1	BEX1	62	2393	4403	5349	5987	3653	[illegible]	[illegible]	[illegible]	[illegible]	81	764	50
Brain-expressed X-linked protein 3	NGFRAP1	8484	3367	4346	5975	[illegible]	5222	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brain-expressed X-linked protein 4	BEX4	36	8	8	36	14	6	2108	3743	6528	2113	197	511	406
CD56	NCAM1	82	551	875	801	999	727	2618	2519	3296	361	2899	425	106
Claudin 11	CLDN11	7	670	739	2374	5820	3373	548	126	213	14	108	18	3
Cytokeratin 10	KRT10	2624	3096	2503	2855	5373	5057	2731	1642	4621	3756	1026	[illegible]	2310
Cytokeratin 17	KRT17	5858	5436	7664	9874	[illegible]	8933	2600	3701	5971	63	304	5283	5662
Cytokeratin 19	KRT19	19604	2081	2432	3214	2435	2532	445	317	7074	877	816	2060	[illegible]
Cytokeratin 7	KRT7	123	249	348	396	515	312	23	9	333	12	54	18	600
Delta-like 1	DLL1	51	348	565	406	497	179	218	98	514	146	162	29	120
Delta-like 3	DLL3	350	4584	3985	6232	5884	5233	1686	3137	5814	758	676	601	492
Hairy and enhancer of split 1	HES1	670	128	129	160	92	82	551	137	335	118	528	2665	2024
Hairy and enhancer of split 6	HES6	117	196	361	481	416	279	5456	2716	3535	1634	694	28	33
Islet 1	ISL1	48	18	23	22	33	16	1807	[illegible]	[illegible]	121	672	34	26
LIM homeobox 1	LHX2	21	9	12	29	8	1	6849	6671	[illegible]	6243	1663	161	29
Neurogenic differentiation 1	NEUROD1	8	44	11	35	62	91	331	135	799	4917	1475	6	2
Neurogenic differentiation 2	NEUROD2	59	49	40	52	32	25	808	231	416	3019	450	61	65
Neuronal cell adhesion molecule	NRCAM	66	721	797	870	1156	1409	3981	4359	4579	1311	1619	5191	659
NK2 homeobox 2	NKX2-2	7	4	7	7	10	4	9725	206	1168	63	201	0	247
Rhombotin-3	LMO3	145	6875	[illegible]	7101	6912	6886	45	2252	[illegible]	182	9992	72	271
Secretagogin	SCGN	77	1950	2620	2468	1701	3052	1164	9356	[illegible]	147	935	42	20
Secretogranin II	SCG2	23	445	299	423	1122	1265	37	693	4085	1002	3050	108	51
Secretogranin III	SCG3	26	1552	1961	1723	1870	1892	2331	3164	[illegible]	5925	3721	54	19
Semaphorin 4C	SEMA4C	1647	941	651	781	1123	742	9648	5452	6341	2769	3426	5124	957
Semaphorin 6C	SEMA6C	118	323	318	279	241	220	1313	1859	619	512	432	1106	107
Seizure related 6 homolog	SEZ6	60	153	143	135	75	86	1087	435	2324	135	690	51	61
Seizure related 6 homolog like	SEZ6L	113	43	25	53	42	26	48	64	116	108	114	18	119
Seizure related 6 homolog like2	SEZ6L2	1464	1136	1667	1852	1336	1089	2317	3026	5631	3793	4933	1491	3247
SRY (sex determining region Y)-box 11	SOX11	13	426	360	361	597	768	3754	6124	981	10	1880	11	17
SRY (sex determining region Y)-box 2	SOX2	8	171	175	270	396	312	2816	74	3267	0	2937	1376	348
SRY (sex determining region Y)-box 4	SOX4	5404	5693	5641	4070	3872	5240	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6451	1367
Synaptosomal-associated protein, 25kDa	SNAP25	10	1037	1040	1027	1108	1040	1112	921	565	618	1612	37	27
Synaptotagmin IV	SYT4	26	1418	1237	2115	3958	3076	1150	1061	[illegible]	2775	2488	11	10
TTF-1	NKX2-1	18	3137	3508	2734	5180	3315	1258	3585	2229	27	311	85	8
Zic family member 2	ZIC2	163	25	18	29	10	5	7683	5555	2940	697	279	93	227

FIG. 7E

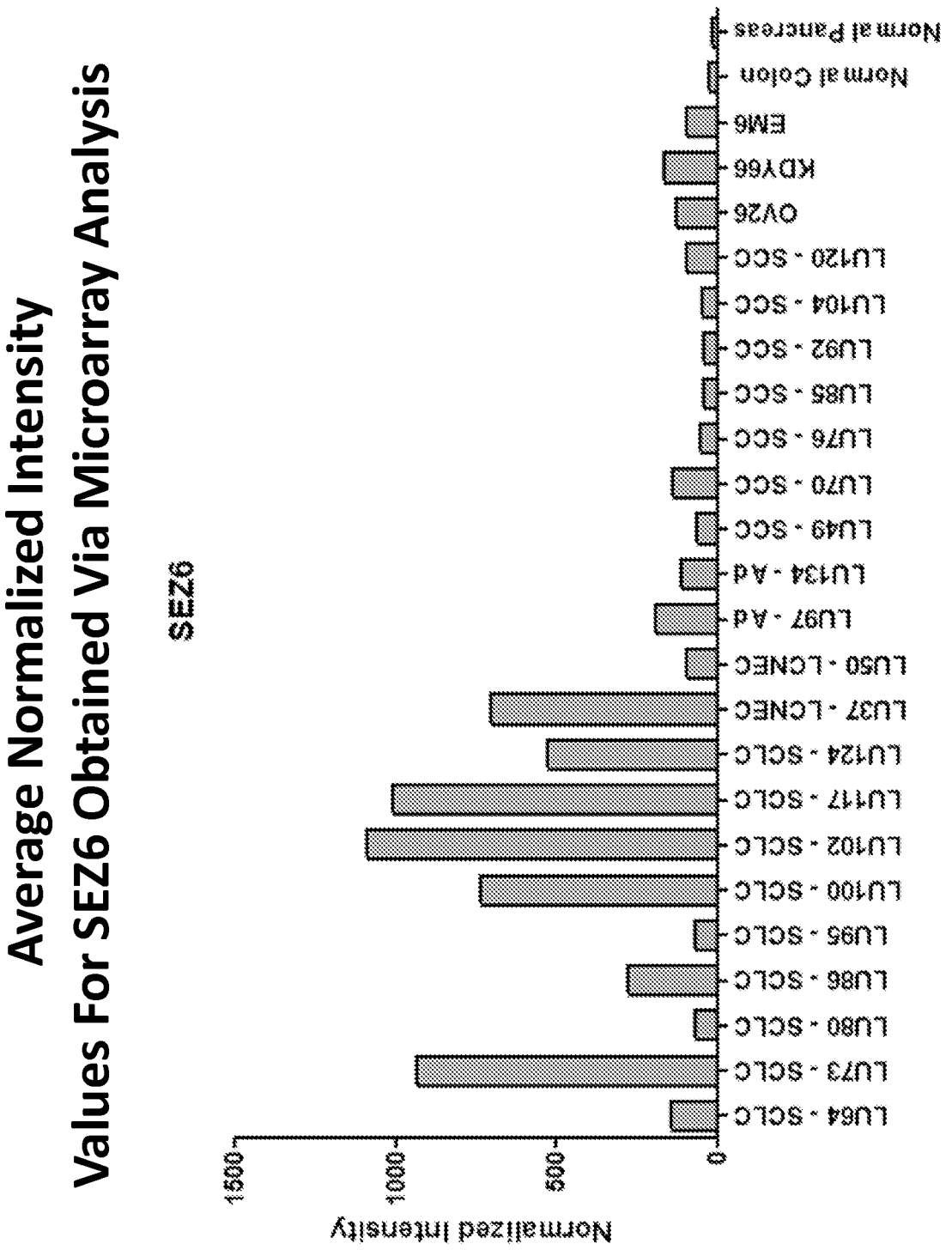

Average Normalized Intensity
Values For SEZ6 Obtained Via Microarray Analysis
SEZ6
Normalized Intensity
0
500
1000
1500
LU64 - SCLC
LU73 - SCLC
LU80 - SCLC
LU86 - SCLC
LU95 - SCLC
LU100 - SCLC
LU102 - SCLC
LU117 - SCLC
LU124 - SCLC
LU37 - LCNEC
LU50 - LCNEC
LU97 - Ad
LU134 - Ad
LU49 - SCC
LU70 - SCC
LU76 - SCC
LU85 - SCC
LU92 - SCC
LU104 - SCC
LU120 - SCC
OV26
KDY66
EM6
Normal Colon
Normal Pancreas

FIG. 7F

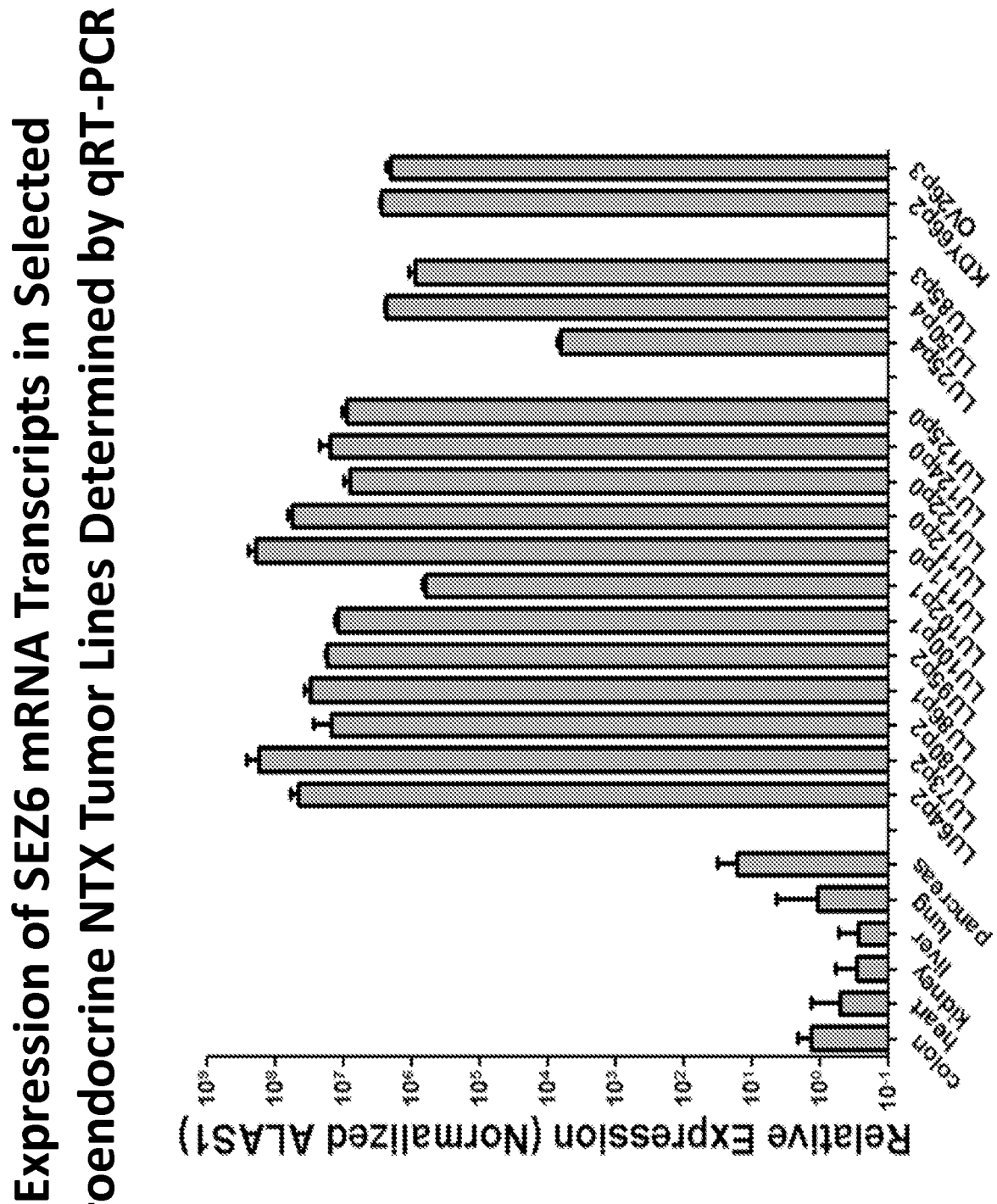

Expression of SEZ6 mRNA Transcripts in Selected Neuroendocrine NTX Tumor Lines Determined by qRT-PCR
Relative Expression (Normalized ALAS1)
colon
heart
kidney
liver
lung
pancreas
LUG4P2
LU73P2
LU80P2
LU86P1
LU95P2
LU100P1
LU102P1
LU117P0
LU122P0
LU124P0
LU125P0
LU125P4
LU130P4
LU85P3
KDYG6P2
OV26P3

FIG. 8A

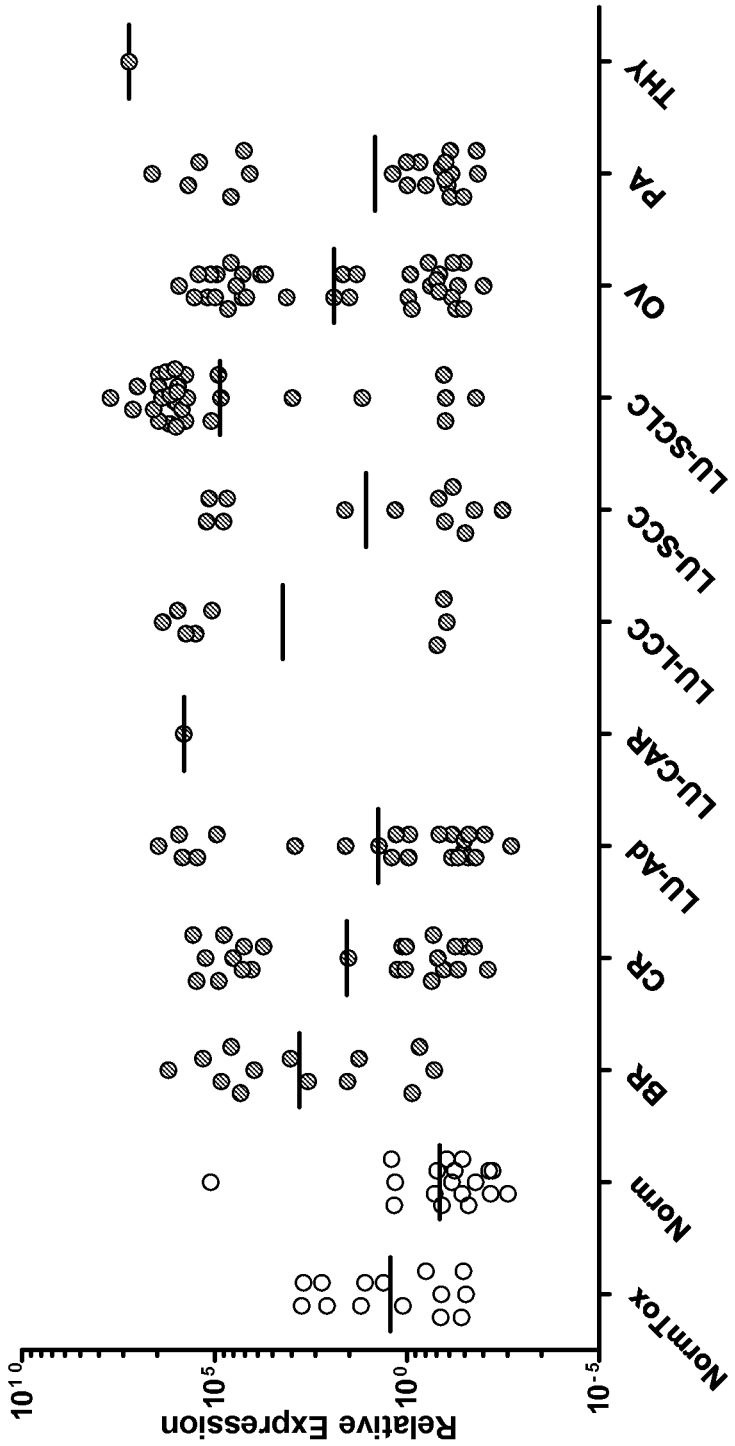

Expression of SEZ6 mRNA Transcripts in
NTX Tumor Lines Determined by qRT-PCR
Relative Expression
10^{10}
10^{5}
10^{0}
10^{-5}
NormTox
Norm
BR
CR
LU-Ad
LU-CAR
LU-LCC
LU-SCC
LU-SCLC
OV
PA
THY

FIG. 8B

Absolute and Normalized SEZ6 mRNA Expression in Various Whole Tumor Samples Using qRT-PCR

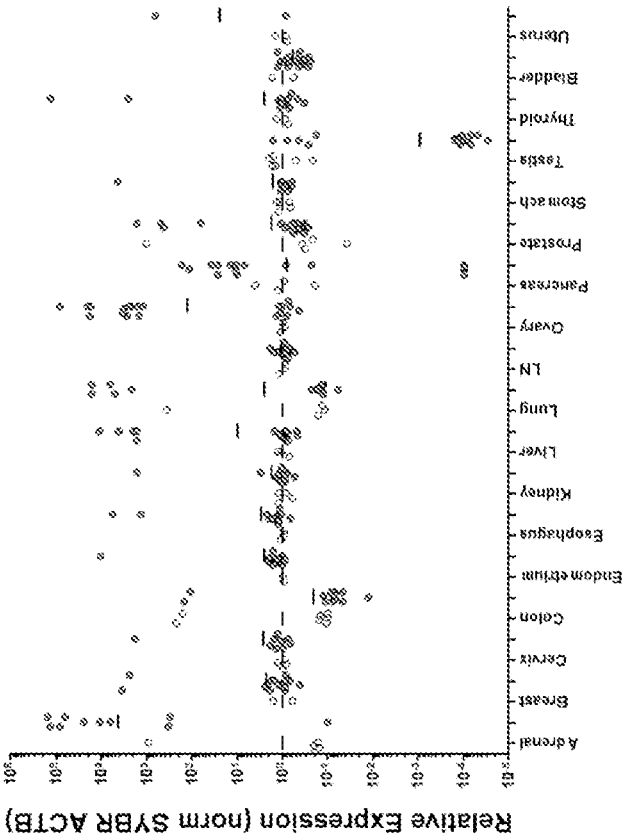


FIG. 9B

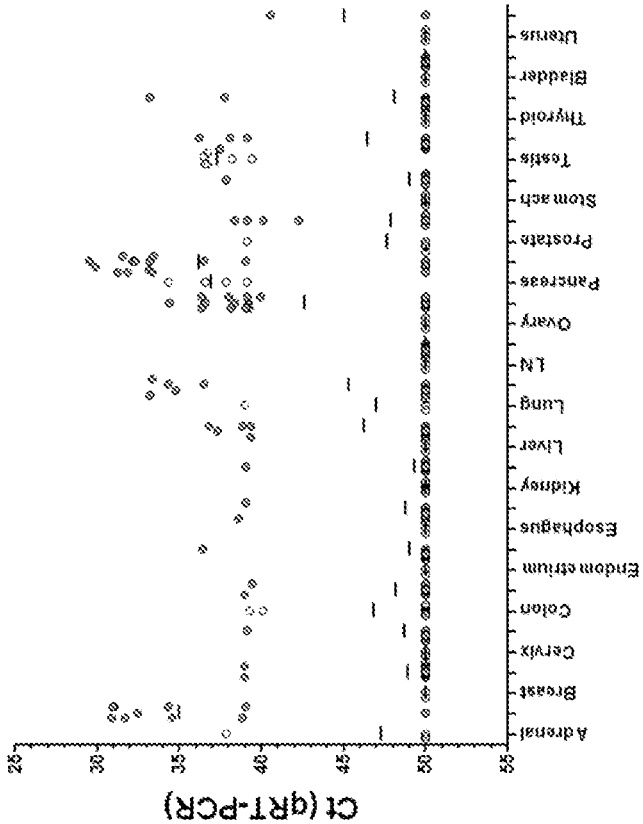


FIG. 9A

Protein Sequences of Exemplary Mouse SEZ6 Modulator Light Chain Variable Regions

10A – LC AA SEQS (incl. Humanized)
10B – HC AA SEQS (incl. Humanized)
10C – Full length LC and HC AA SEQS of hSC17.200 and hSC17.200vL1
Sequence listing – NA SEQS (including Humanized)

FIG. 10

Protein Sequences of Exemplary Murine SEZ6 Modulator Light Chain Variable Regions

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
SC17.1	QIVLTQSPALMSASPGEKVSLTC	SANSTVSFMY	WYQQKPRSSPTPWIY	LTSNLAS	GVPARFSGSGSGTSYSLTISSMEAEDAATYYC	QQWSSNSPIT	FGAGTKLELK	20
SC17.2	DIVMSQSPSSLAVSVGEKVTMSC	KSSQSLLYSSNQKSYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFTGSGSGTDFTLTISSVQAEDLAVYYC	KQSYNLRT	FGGGTKLEIK	22
SC17.9	DIVMSQSPSSLAVSVGEKVTMSC	KSSQSLLYSSNQKNYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFTGSGSGTDFTLTISSVKAEDLAVYFC	QQYYNYPYT	FGGGTKLK	24
SC17.16	DIQMTQSPASLSVSVGETVTITC	RASANINSNLV	WYQQKQGKSPQLLVY	AATNLAD	GVPSRFSGSGSGTQYSLKINSLQSEDFGNYYC	QHFWGTPRT	FGGGTKLEIK	26
SC17.38	DIVVTQSPASLAVSLGQRATISC	RASESVEYYGTSLMQ	WFQQKPGQPPKLLIY	AASNVES	GVPARFSGSGSGTDFSLNIHPVEEDDIAMYFC	QQDRKVPWT	FGGGTKLEIK	28
SC17.3	DIVMSQSPSSLAVSVGEKVTMSC	KSSQSLLYSSNQKNYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFTGSGSGTDFTLTISSVKAEDLAVYYC	QQYYSYPT	FGGGTKLEIK	30
SC17.4	DIKMTQSPSSMYASLGERVTITC	KASQDINSYLT	WFQQKPGKSPKTLIY	RANRLID	GVPSRFSGSGSGQDYSLTISSLDYEDMGIYYC	LQYDDFPWT	FGGGTKLEIK	32
SC17.8	DVVMTQTPLSLPVSLGDQASISC	RSSQSLVHSNGDTYLH	WYLQKPGQSPKLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGLYFC	SQSTLIPYT	FGGGTKLDIK	34
SC17.10	DIVMSQSPSSLAVSVGEKVTMSC	KSSQSLLYSSNQKNYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFTGSGSGTDFTLTISSVKTEDLALYYC	QQYYWFPYT	FGGGTKLEIK	36
SC17.11	ENVLTQSPAIMSASPGEKVTMTC	RASSSVSSSYLH	WYQQKSGASPKLWIY	STSNLAS	GVPARFSGSGSGTSYSLTISSVEAEDAATYYC	QQYSDYPFT	FGSGTKLVIK	38
SC17.14	DVLMTQTPLSLPVSLGDQASISC	RSSQSIVHSNGNTYLE	WFLQKPGQSPKLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGVYYC	FQGSHVPYT	FGGGTKLEIK	40
SC17.15	QIVLTQSPALMSASPGEKVTMTC	SASSSVNYMY	WYQQKPRSSPKPWIY	LTSNLAS	GVPVRFSGSGSGTSYSLTISSMEAEDAATYYC	QQWSNNPPT	FGSGTKLELK	42
SC17.17	QIVLTQSPAIMSASPGEKVTMTC	SASSSVSYMH	WYQQKSGTSPKRWIY	DTSKLPS	GVPARFSGSGSGTSYSLTISSMEAEDAATYYC	QQWSSTPPT	FGAGTKLELK	44
SC17.18	DIQMTQSSSYLSVSLGGRVTITC	KASDHINNWLA	WYQQKPGNAPRLLIS	GATSLET	GVPSRFSGSGSGKDYTLSITSLQTEDVATYYC	QQYWSIPLT	FGAGTKLELK	46
SC17.19	DIVLTQSPASLAVSLGQRAAISC	KPSQSVDYDGDSYMN	WYQQKPGQPPKLLIY	AASNLES	GIPARFSGSGSGTDFTLNIHPVEEEDAATYYC	HQINDDPWT	FGGGTKLK	48
SC17.22	DVVLTQTPLSLPVSLGDQASISC	RSSQSIVHINRHTYLG	WYLQKPGQSLKLLIY	GVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDMGVYYC	FQGTHVPFT	FGSGTKLEIK	50

FIG. 10A

Protein Sequences of Exemplary Murine SEZ6 Modulator Light Chain Variable Regions

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
SC17.24	DIVMSQSPSSLAVSVGEKVTMSC	KSSQSLLYSSNQKSYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFTGSGSGTDFTLTISSVQAEDLAVYYC	KQSYNLRT	FGGGTKLEIK	52
SC17.27	DVVMTQTPLTLSVTIGQPASISC	KSSQSLLESDGKTYLN	WLLQRPGQSPKRLIY	LVSKLDS	GVPDRFTGSGSGTDFTLKISRVEAEDLGVYYC	WQGIQHPRT	FGGGTKLEIK	54
SC17.28	DILLTQSPAILSVSPGEGVSFSC	RASQSIGTSIH	WYQQRTNGSPRLLIK	YASESIS	GIPSRFSGSGSGTDFTLRINSLESEDIADYYC	QQSNSWPLT	FGAGTKLELK	56
SC17.29	DIVMTQSHKFMSTSVGDRVSITC	KASQDVGTDVA	WYQQKPGQSPKLLIY	WASTRHT	GVPDRFTGSGSGTDFTLTISNVQSEDLADYFC	QQYSSYPYT	FGGGTKLEIK	58
SC17.30	ENVLTQSPAIVSASPGEKVTMTC	RASSSVISSYLH	WYQQKSGASPKLWIY	STSNLAS	GVPARFSGSASGTSYSLTISSVEAEDAATYYC	QQYSGYPLT	FGAGTKLELK	60
SC17.32	DIQMTQSPASLSASVGETVTMTC	RASGNIHNYLV	WYQQKQGKSPQLLVY	NAKTLAD	GVPSRFSGSGSGTQYSLKINSLQPEDFGSYYC	QHFWSTPPT	FGGGTKLEIK	62
SC17.34	DIKMTQSPSSMYASLGERVTITC	KASQDINSYLS	WFQQKPGKSPKTLIY	RANRLVD	GVPSRFSGSGSGQDYSLTISSLEYEDMGIYYC	LQYDEFPPT	FGGGTKLEIK	64
SC17.35	ENVLTQSPAIMSASPGEKVTLTC	RASSSMSSSYLH	WYQQKSGASPKLWIY	STSNLAS	GVPARFSGSGSGTSYSLTISSVEAEDAATYYC	QQYSAYPFT	FGSGTKLEIK	66
SC17.36	QIVLTQSPALMSASPGEKVTMTC	SASSSVSYMY	WYQQKPRSSPKPWIY	LTSNLAS	GVPARFSGSGSGTSYSLTISSMEAEDAATYYC	QQWSSNPPT	FGGGTKLEIK	68
SC17.39	DVLMTQTPLSLPVSLGDQASISC	RSSQSLVHRNGNTYFH	WYLQKPGQSPKLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGVYFC	SQSTYVPWT	FGGGTKLEIK	70
SC17.40	DVVMTQTPLSRPVTLGDQASISC	RSSQSLVHSNGNTYLH	WYLQKPGQSPKLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGVYFC	SQNTHVPFT	FGSGTKLEIK	72
SC17.41	QIVLTQSPALMSASPGEKVTMTC	SASSSVSYMY	WYQQKPRSSPKPWIY	LTSNLAS	GVPTRFSGSGSGTSYSLTISSMGAEDAATYYC	QQWNTNPPT	FGAGTKLELK	74
SC17.42	ENVLTQSPAIMSASPGEKVTMTC	SASSSVNYMY	WYQQKSSTSPKLWIY	DTSKLTS	GVPGRFSGSGSGNSYSLTISNMEAEDVATYYC	FQGSGYPLT	FGSGTKLEIK	76
SC17.45	ENVLTQSPAIMSASPGEKVTMTC	SASSSVNYMY	WYQQKSSTSPKLWIY	DTSKLTS	GVPGRFSGSGSGNSYSLTISNMEAEDVATYYC	FQGSGYPLT	FGSGTKLEIK	78
SC17.46	SFVMTQTPKFLLVSAGDRVTITC	KASQSVNNDVA	WYQQKPGQSPKLLIY	YASNRYT	GVPDRFTGSGYGTDFTFTISTVQAEDLAVYFC	QQDYSSPRT	FGGGTKLEIK	80
SC17.47	QIVLTQSPAIMSASPGEKVSMTC	SASSSVSYMH	WYQQKSGTSPKRWIY	DTSKLAS	GVPARFSGSGSGSSYSLTISSMEAEDAATYYC	QQWSSTPPT	FGGGTKLEIK	82

FIG. 10A Cont.

Protein Sequences of Exemplary Murine SEZ6 Modulator Light Chain Variable Regions

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
SC17.49	DVVMTQTPLTLSVTIGQPASISC	KSSQSLLESDGKTYLN	WLLQRPGQSPKRLIY	LVSKLDS	GVPDRFTGSGSGTDFTLKISRVEAEDLGVYYC	WQGIQHPRT	FGGGTKLEIK	84
SC17.50	DIVLTQSPASLAASLGQRATISC	RASQSVSTSSYSYMH	WYQQKPGQPPKLLIK	YASNLES	GVPARFSGSGSGTDFTLNIHPVEEEDTATYYC	QHSWEIPWT	FGGGTKLEIK	86
SC17.53	DIVLTQSPASLAASLGQRATISC	RASQSVSTSSYSYMH	WYQQKPGHPPKLLIR	YASNLES	GVPARFSGSGSGTDFTLNIHPVEEEDTATYYC	QHSWEIPYT	FGGGTKLEIK	88
SC17.54	DVVLTQTPLTLSVTIGQPASISC	KSSQSLLYSDGKTYLN	WLLQRPGQSPKRLIY	LVSKLDS	GVPDRFTGSGSGTDFTLKISRVEAEDLGLYYC	WQGTHFPWT	FGGGTKLEIK	90
SC17.56	DIVMSQSPSSLAVSVGEKVTMSC	KSSQSLLYSSNQKNYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFTGSGSGTDFTLTISSVKAEDLAVYFC	QQYYNYPYT	FGGGTKLEIK	92
SC17.57	QIVLTQSPAIMSASLGERVTMTC	TASSSVSSSYLH	WYQQKPGSSPKLWIY	STSNLAS	GVPPRFSGSGSGTSYSLTISSMEAEDAATYYC	HQYHRSPPT	FGGGTKLEIK	94
SC17.59	DIQMTQSPASLSASVGETVTITC	RASGNLHNYLA	WYQQKQGKSPQLLVY	NAKTLAD	GVPSRFSGSGSGTQYSLKINSLQPEDFGTYFC	QHFWSIPPT	FGGGTKLEIK	96
SC17.61	QIVLTQSPAIMSASPGEKVTISC	SASSSVSYIY	WYQQKPGSSPKPWIY	RTSNLAS	GVPARFSGSGSGTSYSLTISSMEAEDAATYYC	QQYHSYPWT	FGGGTKLEIK	98
SC17.63	SIVMTQTPKFLLVSAGDRVAITC	KASQSVSNDVA	WYQQKPGQSPTLLIS	YASNRYT	GVPDRFTGSGYGTDFTFTISTVQAEDLAVYFC	QQGYSSPFT	FGGGTKLEIK	100
SC17.71	DIQMTQSPASLSASVGETVTIAC	RASGNIHNYLT	WYQQRQGKSPQLLVY	NAKTLAV	GVPSRFSGSGSGTQYSLKINSLQPEDFGSYYC	QHFWNTPPT	FGGGTKLEIK	102
SC17.72	DIQMTQTTSSLSASLGDRVTISC	SASQGISNYLN	WYQQKPDGTVKLLIY	YTSSLHS	GVPSKFSGSGSGTDYSLTISNLEPEDIATYYC	QQYSKLPYT	FGGGTKLEIK	104
SC17.74	DIQMTQSSSYLSVSLGGRVTITC	KASDHINNWLA	WYQQKPGNAPRLLIS	GATSLET	GVPSRFSGSGSGKDYTLSITSLQTEDVATYYC	QQYWSTPPT	FGAGTKLELK	106
SC17.76	DIVITQDELSNPVTSGESVSISC	RSSKSLLYKDGKTYLN	WFLQRPGQSPQLLIY	LMSTRAS	GVSDRFSGSGSGTDFTLEISRVKAEDVGVYYC	QQLVEYPRT	FGGGTKLEIK	108
SC17.77	DIQMTQSPASLSASVGETVTITC	RASGNIHNYLA	WYQQKQGKSPQLLVY	NAKALAD	GVPSRFSGSGSGTQYSLKINSLQPEDFGSYYC	QHFWSIPPT	FGGGTKLEIK	110
SC17.79	DIQMTQSPASLSASVGETVTITC	RASGNIHNYLA	WYQQKQGKSPQLLVY	NAKTLAD	GVPSRFSGSGSGTQYSLRINSLQPEDFGSYYC	QHFWSTPPT	FGGGTKVEIK	112
SC17.81	DIVMSQSPSSLTVSVGEKVTLSC	KSSQSLLYSTNQKIYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFTGSGSGTDFTLAISNVKAEDLAVYYC	QQYYSYPYT	FGGGTKLEIK	114

FIG. 10A Cont.

Protein Sequences of Exemplary Murine SEZ6 Modulator Light Chain Variable Regions

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
SC17.82	QIVLTQSPAIMSASLGEEITLTC	SASSSVSYMH	WYQQKSGTSPKLLIY	STSNLAS	GVPSRFSGSGSGTFYSLTISSVEAEDAADYYC	HQWSSFT	FGSGTKLEIK	116
SC17.84	QIVLTQSPAIMSASPGEKVTMTC	SASSSISYMH	WYQQKSGTSPKRWIY	DTSKLAS	GVPARFSGSGSGTSYSLTISNMEAEDAATYYC	QQWSSTPPT	FGGGTKLEIK	118
SC17.85	DIVMTQAAFSNPVTLGTSASISC	RSSKSLLHSNGITYLY	WYLQKPGQSPQLLIY	QMSNLAS	GVPERFSSSGSGSDFTLRISRVEAEDVGVYYC	AQNLEHPT	FGGGTKLEIK	120
SC17.87	DVVMTQTPLSLPVSLGDQASISC	RSSQSLVHSNGNTYLH	WYLQKPGQSPKLLIS	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGVYFC	SQSTHVPPM	FGGGTRLEIK	122
SC17.89	DVLMTQTPLSLPVSLGDQASISC	RSSQSIVHSNGNTYLE	WYLQKPGQSPKLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGVYYC	FQGSHVPFT	FGSGTKLEIK	124
SC17.90	DIVMSQSPSSLAVSVGEKVTMSC	KSSQSLLYSSNQKNYLA	WYQQKPGQSPKLLIY	WASTRKS	GVPDRFTGSGSGTDFTLTISSVKAEDLAVYYC	HQYYSYPLT	FAAGTKLELK	126
SC17.91	DVVMTQTPLSLPVSLGDQASISC	RSSQSLVHSNGNTYLL	WYLQKPGQSPKLLIY	KVSNRFS	GVPDRFSGSGSGTDFALKISRVEAEDLGVYFC	SQSTHVPWT	FGGGTKLEIK	128
SC17.93	DIVMSQSPSSLAVSVGEKVTMTC	KSSQSLLYSSNQKNYLA	WYQQKPGQSPKLLIY	WASTRES	GVPDRFIGSGSGTDFTLTISSVKAEDLAIYYC	QQYYRYPLT	FGAGTKLELK	130
SC17.95	DIQMTQTTSSLSASLGDRVTISC	SASQGINNYLN	WYQQKPDGTVTLLIY	YTSSLHS	GVPSRFSGSGSGTDYSLTISNLEPEDIATYYC	QQYSKLPWT	FGGGTKLEIK	132
SC17.97	DVVMTQTPLSLPVSLGDQASISC	RSSQSLVHNNGNTYLH	WYLQKPGQSPNLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISIVEAEDLGLYFC	SQSTHVPRT	FGGGTKLEIK	134
SC17.99	DIVMSQSPSSLAVSVGEKVTMNC	ESSQSLLYSSNQKNYLA	WYQQKPGQSPKLLIY	WASTRDS	GVPDRFTGSGSGTDFTLTISSVRAEDPAVYYC	QQYYSYPLT	FGAGTKLELR	136
SC17.102	QIVLTQSPAIMSASPGEKVTMTC	SASSSVSYMH	WYQQKSGTSPKRWIY	DTSKLAS	GVPPRFSGRGSGTSYSLTISSMEAEDAATYYC	QHWSSNPPT	FGAGTKLEMK	138
SC17.114	DVVMTQSPLSLPVSLGDQASISC	RSSQSLVHSNGNTYLH	WYLQKPGQSPKLLIY	KVSSRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGVYFC	SQSTHVPFT	FGSGTKLEIK	140
SC17.115	DIVMTQSPLSLPVSLGDQASISC	RSSQSLVHSNGNTYLH	WYLQKPGQSPKLLIY	RVSNRFS	GVPDRFSGSGSGTDFTLTISRVEAEDLGVYFC	SQSTHLPRT	FGGGTKLEIK	142
SC17.120	DIVLTQSPASLAVSLGQRATISC	RASESVDSYGNSFMH	WYQQKPGQPPKVLIY	RASNLES	GIPARFSGSGSRTDFTLTINPVEDEDVATYYC	QQSNEDPYT	FGGGTKLEIK	144
SC17.121	QIVLTQSPAIMSASPGEKVTMTC	SASSSVSYMH	WYQQKSGTSPKRWIY	DTSKLAS	GVPARFSGSGSGTSYSLTISSMETEDAATYYC	QQWSNTPPT	FGSVTKLEIK	146

FIG. 10A Cont.

Protein Sequences of Exemplary Murine SEZ6 Modulator Light Chain Variable Regions

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
SC17.122	DIVITQDDLSNPVTSGESVSISC	RSSKSLLYKDGKTYLN	WFLQRPGQSPQLLIY	LMSTRAS	GVSDRFSGSGSGTDFTLEISRVKAEDVGVYYC	QQLVEYPRT	FGGGTKLEIK	148
SC17.140	QIVLTQSPAIMSASPGEKVTMTC	SASSSVSYMH	WYQQKSGTSPKRWIY	DTSKLAS	GVPARFSGSGSGTSYSLTISSMEAEDAATYYC	QQWSSTPPT	FGSGTKLEIK	150
SC17.151	DIVLTQFPASLAVSLGQRATIPC	RASESVDSYGNSFMH	WFQQKPGQPPKLLIY	RASNLES	EIPARFSGSGSGTDFTLTINPVEADDVATYYC	QQSHEDPYT	FGGGTKMEIK	152
SC17.156	DVVMTQSPLSLPVSLGDQASISC	RSSQSIVHSNGNTYLE	WYLQKPGQSPKLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDLGVYYC	FQGSHVPPT	FGGGTKLEIK	154
SC17.161	DIVMSQSPSSLAVSVGEKVTMNC	ESSQSLLYNSNQKNYLA	WYQQKPGQSPKLLIY	WASTRDS	GVPDRFTGSGSGTDFTLTISSVRADDPAVYYC	QQYFNYPLT	FGAGTKLELK	156
SC17.166	QIVLTQSPAIMSASPGEKVTMTC	SASSSISYMH	WYQQKSGTSPKRWIY	DTSKLAS	GVPARFSGSGSGTSYSLTISNMEAEDAATYYC	QQWSSTPPT	FGGGTKLEIK	158
SC17.187	DIKMTQSPSSMYASLGERVTLTC	KASQDINSYLS	WFQQKPGKSPETLIY	RANRLID	GVPSRFSGSGSGQDYSLTISSLEYEDMGIYYC	LQYDEFPPT	FGGGTKLEIK	160
SC17.191	QIVLTQSPAIMSASPGEKVTMTC	SASSSVSYMH	WYQQKSGTSPKRWIY	DTSKLAS	GVPARFTGSGSGTSYSLTISSMEAEDAATYYC	QQWSSSPPT	FGAGTKLELK	162
SC17.193	DLVLTQSPASLAVSLGQRATISC	RASESVSTSGYSYMH	WYQQKPGQPPKLLIY	LASNLES	GVPARFSGSGSGTDFTLNIHPVEEEDATTYYC	QHSRELPYT	FGGGTKLEIK	164
SC17.199	DIVLTQSPASLAVSLGQRATISC	RASESVDSYGNSFMH	WYQQKPGQPPKPLIY	RASNLES	GIPARFSGSGSRTDFTLTINPVEADDVATYYC	QQSNEDPYT	FGGGTKLEIK	166
SC17.200	DIVLTQSPASLAVSLGQRATIFC	RASQSVDYNGISYMH	WFQQKPGQPPKLLIY	AASNVQS	GIPARFSGSGSGTDFTLNIHPVEEEDAATFYC	QQSIEDPPT	FGGGTKLEIK	168

FIG. 10A Cont.

Protein Sequences of Exemplary Humanized SEZ6 Modulator Light Chain Variable Regions

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
hSC17.16	DIQMTQSPSSLSASVGDRVTITC	RASANINSNLV	WYQQKPGKAPKLLIY	AATNLAD	GVPSRFSGSGSGTDFTLTISSLQPEDFATYYC	QHFWGTPRT	FGGGTKLEIK	170
hSC17.17	EIVLTQSPATLSLSPGERATLSC	SASSSVSYMH	WYQQKPGQAPRLLIY	DTSKLPS	GIPARFSGSGSGTDFTLTISSLEPEDFAVYYC	QQWSSTPPT	FGQGTKLEIK	172
hSC17.24	DIVMTQSPDSLAVSLGERATINC	KSSQSLLYSSNQKSYLA	WYQQKPGQPPKLLIY	WASTRES	GVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC	KQSYNLRT	FGGGTKVEIK	174
hSC17.28	EIVLTQSPDFQSVTPKEKVTITC	RASQSIGTSIH	WYQQKPDQSPKLLIK	YASESIS	GVPSRFSGSGSGTDFTLTINSLEAEDAATYYC	QQSNSWPLT	FGQGTKLEIK	176
hSC17.34	DIQMTQSPSSLSASVGDRVTITC	KASQDINSYLS	WFQQKPGKAPKSLIY	RANRLVD	GVPSRFSGSGSGTDYTLTISSLQPEDFATYYC	LQYDEFPPT	FGQGTKLEIK	178
hSC17.46	AIQMTQSPSSLSASVGDRVTITC	KASQSVNNDVA	WYQQKPGKAPKLLIY	YASNRYT	GVPSRFSGSGSGTDFTLTISSLQPEDFATYFC	QQDYSSPRT	FGQGTKLEIK	180
hSC17.151	EIVLTQSPATLSLSPGERATLSC	RASESVDSYGNSFMH	WYQQKPGQAPRLLIY	RASNLES	GIPARFSGSGSGTDFTLTISSLEPEDFAVYYC	QQSHEDPYT	FGQGTKLEIK	182
hSC17.155	DIVMTQSPDSLAVSLGERATINC	KSSQSLLYSSNQKNYLA	WYQQKPGQPPKLLIY	WASTRKS	GVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC	HQYYSYPLT	FGQGTKLEIK	184
hSC17.156	DIVMTQTPLSLPVTPGEPASISC	RSSQSIVHSNGNTYLE	WYLQKPGQSPQLLIY	KVSNRFS	GVPDRFSGSGSGTDFTLKISRVEAEDVGVYYC	FQGSHVPPT	FGGGTKLEIK	186
hSC17.161	DIVMTQSPDSLAVSLGERATINC	ESSQSLLYNSNQKNYLA	WYQQKPGQPPKLLIY	WASTRES	GVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC	QQYFNYPLT	FGQGTKLEIK	188
hSC17.200	EIVLTQSPATLSLSPGERATLSC	RASQSVDYNGISYMH	WYQQKPGQAPRLLIY	AASNVQS	GIPARFSGSGSGTDFTLTISSLEPEDFAVYYC	QQSIEDPPT	FGGGTKVEIK	190
hSC17.200vL1	EIVLTQSPATLSLSPGERATLSC	RASQSVDYDGISYMH	WYQQKPGQAPRLLIY	AASNVQS	GIPARFSGSGSGTDFTLTISSLEPEDFAVYYC	QQSIEDPPT	FGGGTKVEIK	192

FIG. 10A Cont.

Protein Sequences of Exemplary Murine SEZ6 Modulator Heavy Chain Variable Regions

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
SC17.1	DVQLQDSGPGLVKPSQSLSVTCTVTGYSIT	WGYYWN	WIRQFPGNKLEWMG	NIHNSGGTNYNPSLKS	RISITRDTSKNQFFLQLNSVTTEDTATYYCAT	TNWDYFDY	WGQGTTLTVSS	21
SC17.2	QVQLQQSDAELVKPGASVKISCKVSGYTFT	DHTIH	WMKQRPEQGLEWIG	YIYPRDGSTKYNEEFKG	KATLTADKSSSTAYMQLNSLTSEDSAVYFCAR	SYSNYFDY	WGQGTTLTVSS	23
SC17.9	QVQLQQPGAEIVRPGASVKLSCKASGYTFT	DYWMN	WVKQRPGQGLEWIG	AIDPSDSYTSYNPKFKG	KATLTVDTSSSSAYMQLSSLTSEDSAVYFCAR	RGTPGKPLVY	WGQGTLVTVSA	25
SC17.16	EVQLQQSGPELMKPGASVKMSCKASGYTFT	DYNMY	WVKQNQGKSLEWIG	EINPNNGGTAYNQKFRG	KATLTVDKSSSTAYMELRSLTSEDSAVYYCAR	YDKGFDY	WGQGTTLTVSS	27
SC17.38	QVTLKESGPGILQPSQTLSLTCSFSGFSLN	TSGMSVG	WVRQPSGRGLEWLA	PIWWNGDKYYNPALKS	RLTISKDTSNNQVFLKIASVVTADTATYFCAR	IRQYYYAMDY	WGQGTSVTVSS	29
SC17.3	QVQLQQPGAELVKPGASVKLSCKASGYTFP	SYWIH	CVKQRPGQGLEWIG	VINPSNGRTNYNEKFKN	KATLTVDKSSSTAYMQLSSLTSEDSAVYYCVR	GGTGYTMDY	WGQGTSVTVSS	31
SC17.4	QIQLVQSGPELKKPGETVKISCKASGYTFT	DYSMH	WVKQAPGKGLKWLG	WINTETGEPTYSEDFKG	RFAFSLETSASTAYLQINNLKNEDTATYFCVK	NKGWFAY	WGQGTLVTVSA	33
SC17.8	QVHLQQSGTEVMKPGASVKISCKATGYTFS	SYWIE	WIKQRPGHGLEWIG	EILPGSGNTNNNEKFKG	KATITADTSSNIAYIQLSSLTSEDSAVYYCAG	GPAAY	WGQGTLVTVSA	35
SC17.10	EVQLQQSGAELVKPGASVKLSCTASGFNIK	DTYMH	WVKQRPEQGLEWIG	RIDPANVNTKYDPKFQG	KATITADTSSNTAYLQLSSLTSEDTAVYYCVR	GNVY	WGQGTLVTVSA	37
SC17.11	EVQLQQSGPELVKPGALVMMSCKASGYTFT	DYYMH	WVKQSHGQSLEWIG	EVIPYNDETFYNRKFKD	KATLTVDKSSSTAYMELRSLTSEDSAIYYCAR	RHRYDGFRYAIDY	WGQGTSVTVSS	39
SC17.14	EVQLQQSGPVLVKPGASVKMSCKASGYTIT	DYNMN	WVKQSHGKSLEWIG	VINPYNGNTRYNQMFKG	KATLTVDKSSSTAYMELNSLTSEDSAVYYCTR	WGTTVVGAN	WGQGTTLTVSS	41
SC17.15	DVKLVESGGGLVKLGGSLKLSCAASGFTFS	SYAMS	WVRQTPEKRLEWVA	TITSGGGNTYYPDSVKG	RFTISRDNAKNTLYLQMSSLKSEDTAMYYCAR	RDYYGSSYVMFAY	WGQGTLVTVSA	43
SC17.17	EVQLQQSGPEVMKPGASVKMSCKASGYTFT	DYNMH	WVKQNQGKSLEWIG	EINPNIGGTGYNQKFKG	KATLTVHKSSSTAYMELRSLTSEDSAVYYCAR	TYSYYSYEFAY	WGQGTLVTVSA	45
SC17.18	QVTLKESGPGILQPSQTLSLTCSFSGFSLS	TSTMGVG	WIRQPSGKGLEWLA	DIWWDDSKYYNPSLKS	RLTISKDTSSNQVFLKITSVDTADTATYYCAR	KGRTARATRGFAY	WGHGTLVTVSA	47
SC17.19	DVQLQESGPGLVKPSQSLSVTCTVTGYSIT	SSYTWN	WIRQFPGNKLEWMG	YIHYSGSTNYNPSLRS	RISITRDTSKNQFFLQLNSVTTEDTATYYCAR	SRYYYDAYGFAY	WGQGTLVTVSA	49
SC17.22	QIQMMQSGPELKKPGETVKISCKASGYSFT	NYGMN	WVKQAPGKGLKWMG	WINTYTGEPTYADDFKG	RFAFSLETSASTAYLQINNLKNEDMATYFCTR	GYYGSSYDALDY	WGQGTSVTVSS	51

FIG. 10B

Protein Sequences of Exemplary Murine SEZ6 Modulator Heavy Chain Variable Regions

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
SC17.24	QVQLQQSDAELVKPGASVKISCKVSGYTFT	DHTIH	WMKQRPEQGLEWIG	YIYPRDGSTKYNEEFKG	KATLTADKSSSTAYMQLNSLTSEDSAVYFCAR	SYSNYFDY	WGQGTTLTVSS	53
SC17.27	QVQLQQSGAELVRPGASVTLSCKASGYTFT	DYEMH	WVKQTPVHGLEWIG	GIDPETGGTAYNQKFKG	KATLTADKSSSTAYMELRSLTSEDSAVYFCTR	WFSY	WGPGTLVTVSA	55
SC17.28	QVHLPQSRPELVKPGASVKISCKASGYGFT	RSYIH	WVKQRPGQGLEWIG	YISSGSGGTTYNQKFKG	KASLTADNPSSTAYMHLSSLTSEDSAIYFCAR	GGVRYFDV	WGAGTTVTVSS	57
SC17.29	EVQLQQSGPELMKPGASVKMSCKASGYTFT	DYNMH	WVKQNQGKSLEWIG	EINPHNGGTGYNQKFKG	KATLTVDKSSSTSYMELRSLTSEDSAVYYCAG	GYPAFDY	WGQGTTLTVSS	59
SC17.30	EVKLVESEGGLVQPGSSMKLSCTASGFTFS	DYYMA	WVRQVPEKGLEWVA	NINYDGSSTYYLDSLKS	RFIISRDNAKNILYLQMSSLKSEDTATYYCAR	DDYYGSSPSYWYFDV	WGAGTTVTVSS	61
SC17.32	EVKLEESGGGLVQPGGSMKLSCVASGFTFS	NYWMS	WVRQSPEKGLEWVA	EIRLKSNNYATHYAESVKG	RFTISRDDSKSSVFLQMNNLRTEDTGIYYCTR	HYYYAMDY	WGQGTSVTVSS	63
SC17.34	EVQLQQSGPELVKPGSSVKISCKASGYTFT	DYNMD	WVKQSHGKRLEWIG	YIYPDNGGAGYNQKFKG	KATLTVDKSSSTAYMELRSLTSEDSAVYYCSR	SITTAWFAY	WGQGTLVTVSA	65
SC17.35	EVQLQQSGPELVKPGALVKMSCKASGYTFT	DYYIH	WVKQSHGKSLEWIG	EINPYNGETFYNQKFKG	KATLTVDKSSSTAYMELRSLTSEDSAVYYCAR	RGWYLTGYAMDY	WGQGTSVTVSS	67
SC17.36	EVQLQESGPSLVKPSQSQSLTCSVTGDSIT	SDYWN	WIRKFPGKKVEYMG	YINYSGSTYYNPSLKS	RISITRDTSKNQYYLQLNSVTSEDTATYYCAR	TSYYNKFLPFAY	WGQGTLVTVSA	69
SC17.39	EVQLVESGGGLVQPGGSRKLSCAASGFTFS	SYGMH	WVRQAPEKGLEWVA	YISSNDGTIYYADTVRG	RFTISRDNAKNTLFLQMTSLRSEDTAMYYCAR	PSNWVFDY	WGQGTTLTVSS	71
SC17.40	QVQLQQPGAEIVRPGASVKLSCKASGYTFT	DYWMN	WVKQRPGQGLEWIG	TIDPSDSYTRYNQKFKG	KATLTVDTSFSSAYMQLSSLTSEDSAVYFCAS	GGRGFGY	WGQGTPVTVSV	73
SC17.41	DVKLVESGGGLVKLGGSLKLSCAASGFTFS	SYAMS	WVRQTPEKRLEWVA	TISSGGGNTYYPDSVKG	RFTISRDNAKNTLYLQMSSLKSEDTAMYYCAR	RDYYGTSYVMFAY	WGQGTLVTVS	75
SC17.42	DVKLVESGGGLVRPGGSLKLSCAASGFTFS	RYTMS	WVRQTPEKRLEWAA	TINSGGSNTYYPDSVKG	RFTISRDNAKNTLFLQMSSLKSEDTAMYYCTN	GNH	WGQGTTLTVSS	77
SC17.45	QVQLQQPGSVLVRPGDSVKLSCKASGYTFT	SYWMH	WVKQSPGQGLEWIG	EIHPHSGSTNYNEKFKG	KATLTVDTSSSTAYVDLSSLTSEDSAVYYCVG	GHYDY	WGQGTTLTVSS	79
SC17.46	QVQLQQPGAELVKPGASMKLSCKASGYTFT	SYWIN	WVKQRPGQGLEWIG	NIFPDTTTTNYNEKFKS	KATLTVDTSSSTAYMQLSSLTSDDSAVYYCAR	EYYDGTYDAMDY	WGQGTSVTV	81
SC17.47	EVQLQQSGPELVKPGASVKISCKASGYSFT	DYYMR	WVKQSPEKSLEWIG	EINPSTGGTTYNQNFKA	KATLTVDKSSSTAYMQLKSLTSEDSAVYYCAR	GGYFLYYFDY	WGQGTTLTVSS	83

FIG. 10B Cont.

Protein Sequences of Exemplary Murine SEZ6 Modulator Heavy Chain Variable Regions

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
SC17.49	QVQLQQSGAELVRPGASVTLSCKASGYTFT	DYEMH	WVKQTPVHGLEWIG	GIDPETGGTAYNQKFKG	KATLTADKSSSTAYMELRSLTSEDSAVYFCTR	WFSY	WGPGTLVTVSA	85
SC17.50	EVQLVESGGGLVKPGGSLKLSCAASGFTFS	DYGMH	WVRQAPEKGLEWVA	YISSGSRTIYYADTVKG	RFTISRDNAKNTLFLQMTSLRSEDTAMYYCAR	VYYGSTYGYFDV	WGTGTTVTVSS	87
SC17.53	EVQLQQSGPELVKPGASVKISCKASGYTFT	DYNMH	WVKQSHGKRLEWIG	YIHPYNGGSGYNQKFKR	KATLTVDNSSNTTYMELRSLTSEDSAVYYCAR	SYDYDTWFGY	WGQGTLVTVRA	89
SC17.54	EVKLEESGGGLVQPGGSMKLSCVASGFTFS	NYWIN	WVRQSPEKGLEWVA	EIRMKSNNYATHYAESVKG	RFTISRDDSKSCVYLQMNNLRPEDTGIYYCTR	GGY	WGQGTTLTVS	91
SC17.56	QIQLVQSGPELKKPGETVKISCKASGYTFT	NYGMN	WVKQAPGKGLKWMA	WINTYTGEPTYADDFKG	RFAFSLETSASTASLQIINLKNEDTATYFCAR	IGDSSPSDY	WGQGTTLTV	93
SC17.57	QIQLVQSGPELKKPGETVKISCKASDYTFT	DFSIH	WVRQSPGKGLKWMG	WINTETGEPTVAEDFKG	RFAFSLETSASTAFLQIYNLKNEDSATYFCAR	GRYYGHDYAMDY	WGQGTSVTVSS	95
SC17.59	EVKLEESGGGLVQPGGSMKLSCVASGFTFS	NYWMN	WVRQSPEKGLEWVA	EIRLKSNNYATHYAESVKG	RFTISRDDSKSSVYLQMNNLRAEDTGIYYCTR	LWDFAMDY	WGQGTSVTVSS	97
SC17.61	QVTLKESGPGILQPSQTLSLTCSFSGFSLS	TFGMGVG	WIRQPSGKGLEWLA	QIWWDDYKYYNPALKS	RLTISKDTSKNQVFLKIANVDTADTATYYCAR	IGYYSGSSRCWYFDV	WGTGSTVTVSS	99
SC17.63	QVQLQQSDAELVKPGASVKISCKAAGYTFT	DLTIH	WVKQRPEQGLEWIG	YIYPGDSNTKYNEKFKG	KATLTADKSSSTAYMQLNSLTSEDSVVYFCAR	MITPYYFDY	WGQGTTLTV	101
SC17.71	EVKLEESGGGLVQPGGSMKLSCVASGIIFS	NYWMN	WVRQSPEKGLEWVA	EIRLKSNNYSTHYAESVKG	RFTISRDDSKSSVYLQMNNLRAEDTGIYYCTR	HYYYAMDY	WGQGTSVTVSS	103
SC17.72	EVQLVESGGGLVKPGGSLKLSCAASGFTFS	SYGMS	WVRQTPEKRLEWVA	AINSNGGSTYYPDTVKG	RLTISRDNGKNTLYLQMSSLRSEDTALYYCVR	DDGYYVFFAY	WGQGTLVTVSA	105
SC17.74	QVQLKQSGPGLVAPSQSLSITCTVSGFSLT	SYGVD	WVRQSPGKGLEWLG	VIWGGGSTNYNSALKS	RLSITKDNSKSQVFLKMNSLQTDDTAMYYCAS	GDYDGSLWFAY	WGQGTLVTVSA	107
SC17.76	EVQLVESGGDLVKPGGSLKLSCVASGFTFS	SYGMS	WVRQTPDKRLEWVA	TISSGGTFTYYPDSVKG	RFTVSRDNAKNTLYLQMSSLKSEDTAMYYCSR	HGWG	WGQGTLVTVSA	109
SC17.77	EVKLEESGGGLVQPGGSMKLSCVASGFTFS	NYWMN	WVRQSPEKGLEWVA	EIRLKSNNYATHYAESVKG	RFTISRDDSKSSVYLQMNNLRVEDTAIYYCTR	HYDYAMDY	WGQGTSVTVSS	111
SC17.79	EVKLEESGGGLVQPGGSMKLSCVASGFTFS	DYWMN	WVRQSPEKGLELVA	EIRLISNNYATHYAESVKG	RFTISRDDSKSSVYLQMNNLRAEDTGIYYCTR	HYYYALDY	WGQGTSVTVSS	113
SC17.81	EVQLQQSGAELVKPGASVKLSCTASGFNIN	DTYYH	WLKQRPEQGLEWIG	RIDPANVNTKYDPKFQG	KATLTADTSSNTAYLQLSSLTSEDTAVYYCGR	GNAY	WGQGTLVTVSA	115

FIG. 10B Cont.

Protein Sequences of Exemplary Murine SEZ6 Modulator Heavy Chain Variable Regions

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
SC17.82	EVQLQQSGPELVKPGASVKMSCKASGYTFT	DSYMN	WVKQSHGKSLEWIG	RVNPNNGGASYNHKFKG	KATLTVDKSLSTAYMRLNSLTSEDSAVYYCSR	SGDLYYYAMDY	WGQGTSVTVSS	117
SC17.84	EVQLQQSGPELMKPGASVKMSCKASGYIFT	DYNMH	WVKQNQGKSLEWIG	EVNPNTGGIGYNQKFKG	KATLTVDKSSSTAYMDLRSLTSEDSAVYYCAR	DGNYCFDY	WGQGTTLTVSS	119
SC17.85	EVQLVESGGDLVKPGGSLKLSCAASGFTFS	NYGMS	WVRQTPDKRLEWVA	TISTGGTYTYYPDSVKG	RFTISRDNAKNTLYLQMSSLKSEDTAMYYCVG	QSYSDYVSFAY	WGQGTQVTVSA	121
SC17.87	EVQLQQSGAELLKPGASVKLSCTASGLNIK	DYYIH	WVYQRPEQGLEWIG	RIDPESDNTLYDPKFQG	KASITADTSSNTAYLQLSSLTSEDTAVYYCTT	NTPFAY	WGQGTLVTVST	123
SC17.89	QVQLQQSGAELVRPGTSVKVSCKTSGYAFT	NYLIE	WVKQRPGQGLEWIG	VINPGSGGTNYNEKFKV	KATLTADKSSSTAYMQLTSLTSDDSAVYFCTR	RDGYFFPWFAY	WGQGTLVTVSA	125
SC17.90	QVQLQQPGSVLVRPGASVKLSCKASGYTFT	SYWMH	WVKQRPGQGLEWIG	EIHPNNGSTNYNEKFKG	KATLTVDTSSSTAYVDLSSLTSEDSAVYYCAR	WTLFTY	WGQGTLVTVSA	127
SC17.91	EVQLVESGGGLVKPGGSRKLSCAASGFTFS	DYGMH	WVRQAPEKGLEWVA	YISRGSSTIHYADTVKG	RFTISRDNAKNTLFLQMTSLRSEDTAMYYCAR	PFNWYFDV	WGAGTTVTVSS	129
SC17.93	QVQLQQPGAELVKPGASVMLSCKASGYTFT	SYWVH	WVKQRPGQGLEWIG	VINPRNGRNNYNEKFKT	KATLTVDKSSSTAYMQLSSPTSEDSAVYYCAR	EDYDGGDYAMDY	WGQGTSVTVSS	131
SC17.95	EVELQQSGPELVKPGASVKISCKTSGNTYT	EYTMQ	WVKLSHGKSLEWIG	GINPNNGITSYNQKFKG	KATLTVDKSSSTAYMELRSLKSEDSAVYYCAR	AGLGNYVWAMDY	WGQGASVTVSS	133
SC17.97	QVQLPQSGAELAKPGASVKISCKASGFTFT	SYWMH	WVKQRPGQGLEWIG	YINPSTDYTEYNQKFKD	KATLTADKSSSTAYMQLGSLTSEDSAVYYCAR	SSYGSSPFDY	WGQGSTLTVSS	135
SC17.99	EVKLEESGGGLVQPGGSMKLSCAASGFTFS	DAWMD	WVRQSPEKGLEWVA	EIRSKANNHATYYAESVKG	RFTISRDDSKSSAYLQMNSLRAEDTGIYYCVS	TGTSY	WGQGTLVTVSA	137
SC17.102	EVQLQQSGPELMKPGASVKMSCKASGDTFT	DYNIH	WVKQNQGKSLEWIG	EVNPNIGGIGYNQKFKG	KATLTVDKSSSTAYMELRSLTSEDSAVYYCAM	GRWYFDV	WGAGTTVTVSS	139
SC17.114	EVQLQQSGPEMVKPGASVKISCKASGYTFT	DYYMH	WVKQSHGKSLEWIG	RVNTNNGGTSYDQKFEG	KATLTVDKSSSTAYMELNSLTSEDSAVYYCVI	PAWFAY	WGQGTLVTVSA	141
SC17.115	QVQLQQSGSVLVRPGASVKLSCKASGYTFT	SYWMH	WVKQRPGQGLEWIG	EIHPNSGNTNYNEKFKG	KATLTVDTSSSTAYVDLSSLTSEDSAVYYCAG	GNYDY	WGQGTTLTVSS	143
SC17.120	EVQLEQSGTVLARPGASVKMSCKASGYTFT	SYWMH	WVKQRPGQGLEWIG	AFYPGNSGTYYNQKFKD	KAKLTAVTSASTAYMELSSLTNEDSAVYYCSR	SGSGRFAY	WGQGTLVTVSA	145
SC17.121	EVQLQQSGPELMKPGASVKMSCKASGYTFT	DHNIH	WVKQHQGKSLEWIG	EINPNTGGTGYNQKFQG	KATMTVDKSSSTAYMELRSLTSEDSAVYYCVR	GLYFFDY	WGQGTTLTVSS	147

FIG. 10B Cont.

Protein Sequences of Exemplary Murine SEZ6 Modulator Heavy Chain Variable Regions

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
SC17.122	EVHLVESGGDLVKPGGSLKLSCAASGFTFS	SYGMS	WVRQTPDKRLEWVA	TISSGGTYTYYPDSVKG	RFTISRDNAKNTLYLQMSSLKSEDTAMYYCSR	HGWG	WGQGTLVTVSA	149
SC17.140	EVQLQQSGPELMKPGASVKMSCKASGYTFT	DYNMH	WVKQNQGKSLEWIG	EINPNTGGTGYNQKFKG	KATLTVDKFSSTAFIELRSLTSEDSAIYYCTR	GGYDHYWYFDV	WGAGTTVTVSS	151
SC17.151	EVQLQQSGTVLARPGASVKMSCKASGYTFT	SYWMH	WVKQRPGQGLEWIG	AIYPGKNDTTYNQKFKG	KAKLTAVTSASTLYMELSSLTNEDSAVYYCTR	SGKGYFAY	WGQGTLVTVSA	153
SC17.156	QVTLKESGPGILQPSQTLSLTCSFSGFSLS	TSGMGVS	WIRKTSGKGLEWLA	HIFWDDDKWYNPSLKS	RLTISKATSSNQVFLILTSVDTADTATYYCAT	FYGLYFAY	WGQGTTLTVSS	155
SC17.161	EVKLEESGGGLVQPGGSMKLSCAASGFTFS	DAWMD	WVRQSPEKGLEWVA	EIRSKPNNHATYYAESVKG	RFTISRDDSKSSAYLQMNSLRAEDTGIYYCVS	TGTSY	WGQGTLVTVSA	157
SC17.166	EVQLQQSGPELMKPGASVKMSCKASGYIFT	DYNMH	WVKQNQGKSLEWIG	EVNPNTGGIGYNQKFKG	KATLTVDKSSSTAYMDLRSLTSEDSAVYYCAR	DGNYCFDY	WGQGTTLTVSS	159
SC17.187	EVHLQQSGPELVNPGSSVKISCKAAGYTFT	DYNMD	WVKQSHGKRLEWIG	NIYPNNGGAGYNQNFKD	KATLTVDKSSSTAYMELRSLTSEDSAVYYCAR	SITAAWFAY	WGQGTLVTVSA	161
SC17.191	EVQLQQSGPELMKPGASVKMSCKASGYTFT	DYNMH	WVKQNQGKSLEWIG	EINPNTGGTGYNQKFKD	KATLTVDKSSSTAYMELRSLTSEDSAVYYCAR	IPSLRRYYFDY	WGQGTTLTVSS	163
SC17.193	QVTLKESGPGILQPSQTLSLTCSFSGFSLI	TYGIGVG	WIRQPSGKGLEWLA	HIWWNDNKYYNTALKS	RLTISKDTSNNQVFLKIANVDTADTATYYCAR	MVYYDYDGGFAY	WGQGTLVTVSA	165
SC17.199	EVQLQQSGTVLARPGASVRMSCKASGYTFT	SYWMH	WVKQRPGQGLEWIG	AIYPGNSDTSYNHKFKG	KAKLTAVTSASTAYMELSSLTNEDSAVYYCTR	SGTGWFAY	WGQGTLVTVS	167
SC17.200	QVQLQQSGPELVKPGASVKISCKASGYAFS	SSWIN	WVKQRPGQGLEWIG	RIYPGEGDTNYSGNFEG	KATLTADKSSTTAYMQLSSLTSVDSAVYFCTR	GLVMDY	WGQGTALTVSS	169

FIG. 10B Cont.

Protein Sequences of Exemplary Humanized SEZ6 Modulator Heavy Chain Variable Regions

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
hSC17.16	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	DYNMY	WVRQAPGQGLEWMG	EINPNNGGTAYNQKFRG	KVTMTRDTSISTAYMELSRLRSDDTAVYYCAR	YDKGFDY	WGQGTTVTVSS	171
hSC17.17	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	DYNMH	WVRQAPGQGLEWMG	EINPNIGGTGYNQKFKG	RVTMTRDTSISTAYMELSRLRSDDTAVYYCAR	TYSYYSYEFAY	WGQGTLVTVSS	173
hSC17.24	EVQLVQSGAEVKKPGATVKISCKVSGYTFT	DHTIH	WVRQAPGKGLEWIG	YIYPRDGSTKYNEEFKG	RVTITADTSTDTAYMELSSLRSEDTAVYYCAR	SYSNYFDY	WGQGTTVTVSS	175
hSC17.28	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	RSYIH	WVRQAPGQGLEWMG	YISSGSGGTTYNQKFKG	RVTSTRDTSISTAYMELSRLRSDDTAVYYCAR	GGVRYFDV	WGQGTTVTVSS	177
hSC17.34	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	DYNMD	WVRQAPGQRLEWIG	YIYPDNGGAGYNQKFKG	RVTITVDTSASTAYMELSSLRSEDTAVYYCSR	SITTAWFAY	WGQGTLVTVSS	179
hSC17.46	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	SYWIN	WVRQAPGQGLEWIG	NIFPDTTTTNYNEKFKG	RVTLTRDTSISTAYMELSRLRSDDTAVYYCAR	EYYDGTYDAMDY	WGQGTLVTVSS	181
hSC17.151	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	SYWMH	WVRQAPGQGLEWMG	AIYPGKSDTTYNQKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	SGKGYFAY	WGQGTLVTVSS	183
hSC17.155	QVQLVQSGAEVKKPGASVKVSCKASGYTFN	SYWMH	WVRQAPGQGLEWMG	EIHPNNGSTNYNEKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	WTLFTY	WGQGTLVTV	185
hSC17.156	QVTLKESGPVLVKPTETLTLTCTVSGFSLS	TSGMGVS	WIRQPPGKALEWLA	HIFWDDDKWYNPSLKS	RLTISKDTSKSQVVLTMTNMDPVDTATYYCAT	FYGLYFAY	WGQGTLVTVSS	187
hSC17.161	QVQLVQSGAEVKKPGASVKVSCKASGFTFS	DAWMD	WVRQAPGQRLEWMG	EIRSKPNNHATYYAESVKG	RVTITRDTSASTAYMELSSLRSEDTAVYYCAR	TGTSY	WGQGTLVTVSS	189
hSC17.200	EVQLVQSGAEVKKPGESLKISCKGSGYSFT	SSWIN	WVRQMPGKGLEWMG	RIYPGEGDTNYSGNFEG	QVTISADKSISTAYLQWSSLKASDTAMYYCTR	GLVMDY	WGQGTLVTVSS	191
hSC17.155vH1	QVQLVQSGAEVKKPGASVKVSCKASGYTFD	SYWMH	WVRQAPGQGLEWMG	EIHPNNGSTNYNEKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	WTLFTY	WGQGTLVTV	193
hSC17.155vH2	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	SYWMH	WVRQAPGQGLEWMG	EIHPNNGSTNYNEKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	WTLFTY	WGQGTLVTV	194
hSC17.155vH3	QVQLVQSGAEVKKPGASVKVSCKASGYTFN	YYWMH	WVRQAPGQGLEWMG	EIHPNNGSTNYNEKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	WTLFTY	WGQGTLVTV	195
HSC17.155vH4	QVQLVQSGAEVKKPGASVKVSCKASGYTFN	SYWMH	WVRQAPGQGLEWMG	EIHPNDGSTNYNEKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	WTLFTY	WGQGTLVTV	196

FIG. 10B Cont.

Protein Sequences of Exemplary Humanized SEZ6 Modulator Heavy Chain Variable Regions

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
hSC17.155vH5	QVQLVQSGAEVKKPGASVKVSCKASGYTFN	SYWMH	WVRQAPGQGLEWMG	EIHPNGGSTNYNEKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	WTLFTY	WGQGTLVTV	197
hSC17.155vH6	QVQLVQSGAEVKKPGASVKVSCKASGYTFN	SYWMH	WVRQAPGQGLEWMG	EIHPNSGSTNYNEKFKG	RVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR	WTLFTY	WGQGTLVTV	198
hSC17.161vH1	EVQLVESGGGLVQPGGSLRLSCAASGFTFS	DAWMD	WVRQAPGKGLEWVG	EIRSKPNNHATYYAESVKG	RFTISRDDSKNSLYLQMNSLKTEDTAVYYCAR	TGTSY	WGQGTLVTVSS	199

FIG. 10B Cont.

Amino Acid Sequences of Exemplary Full Length Humanized Anti-SEZ6 Antibody Light and Heavy Chains

Name	Chain	Full Sequence	SEQ ID NO
hSC17.200	Light	EIVLTQSPATLSLSPGERATLSCRASQSVDYNGISYMHWYQQKPGQAPRLLIYAASNVQSGIPARFSGSGSGTDFTLTISSLEPEDFAVYYCQQSIEDPPTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC	400
hSC17.200	Heavy	EVQLVQSGAEVKKPGESLKISCKGSGYSFTSSWINWVRQMPGKGLEWMGRIYPGEGDTNYSGNFEGQVTISADKSISTAYLQWSSLKASDTAMYYCTRGLVMDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPG	401
hSC17.200vL1	Light	EIVLTQSPATLSLSPGERATLSCRASQSVDYDGISYMHWYQQKPGQAPRLLIYAASNVQSGIPARFSGSGSGTDFTLTISSLEPEDFAVYYCQQSIEDPPTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC	402

FIG. 10C

SEZ6 Modulator Characteristics

Clone	Bin	Hu Affinity (Kd, nM)	Mouse XR	Rat XR (Kd, nM)	Cyno XR	SEZ6L XR	SEZ6L2 XR
SC17.3	D	N.D.	No	No	N.D.	No	No
SC17.4	A	N.D.	No	No	N.D.	No	No
SC17.6	B	<1	Yes	Yes (<1)	N.D.	No	Yes
SC17.7	A	N.D.	Yes	No	No	Yes	Yes
SC17.17	U	1.8	No	Yes (5.0)	Yes	No	No
SC17.19	E	5.3	Yes	Yes	N.D.	No	Yes
SC17.24	C	5.1	Yes	No	Yes	No	No
SC17.26	F	62.0	Yes	Yes (17.4)	Yes	No	Yes
SC17.28	U	22.1	No	Yes (31)	N.D.	No	Yes
SC17.34	A	15.1	No	Yes (79.5)	Yes	No	No
SC17.36	A	6.3	No	No	Yes	No	No
SC17.42	A	2.7	Yes	Yes (3.0)	No	No	No
SC17.45	A	17.4	No	No	Yes	No	No
SC17.46	E	N.D.	No	No	No	No	No
SC17.49	U	23.1	No	No	N.D.	No	No

FIG. 11A

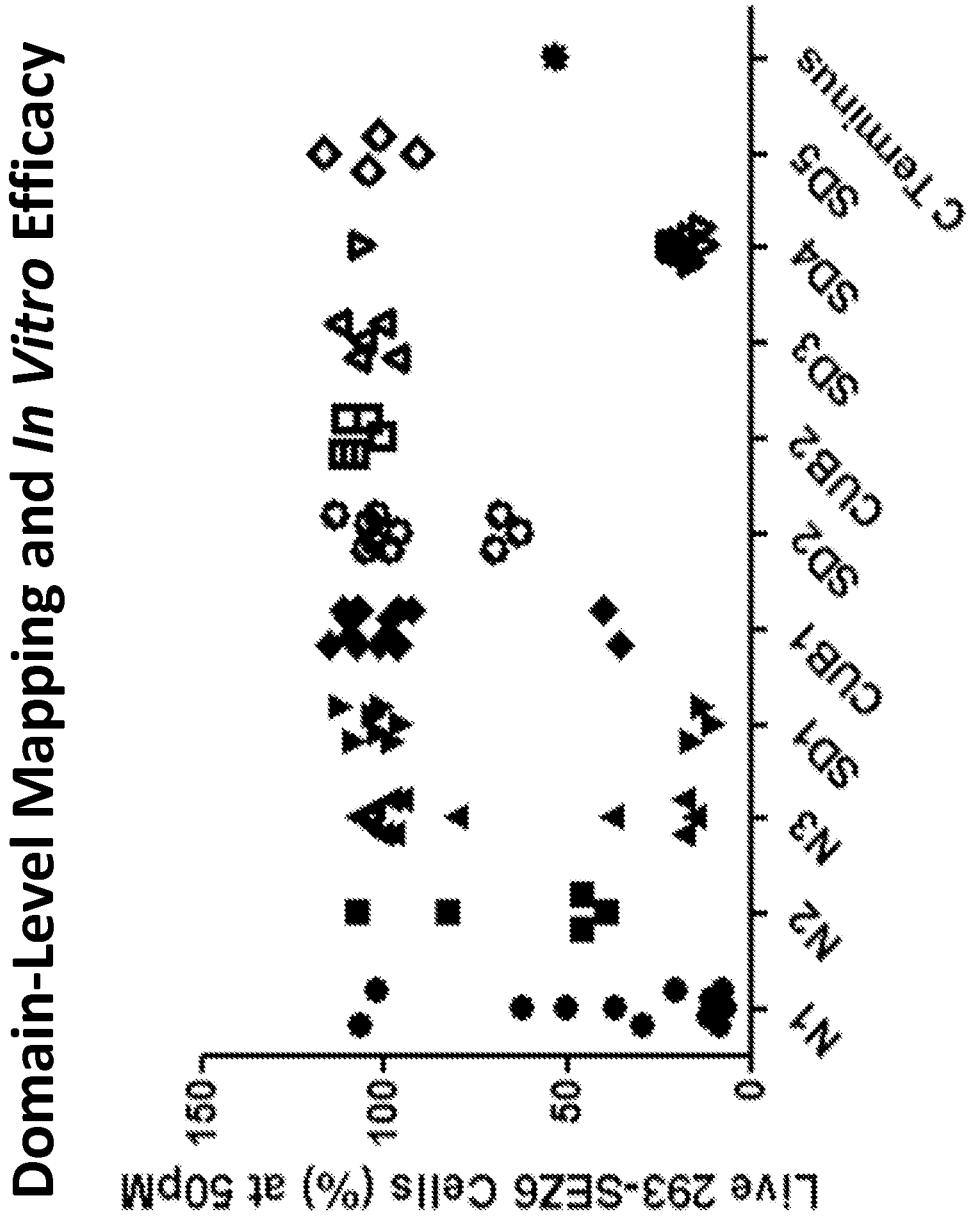

Correlation Between
Domain-Level Mapping and *In Vitro* Efficacy
Live 293-SEZ6 Cells (%) at 50pM
150
100
50
0
N1
N2
N3
SD1
CUB1
SD2
CUB2
SD3
SD4
SD5
C Terminus

FIG. 11B

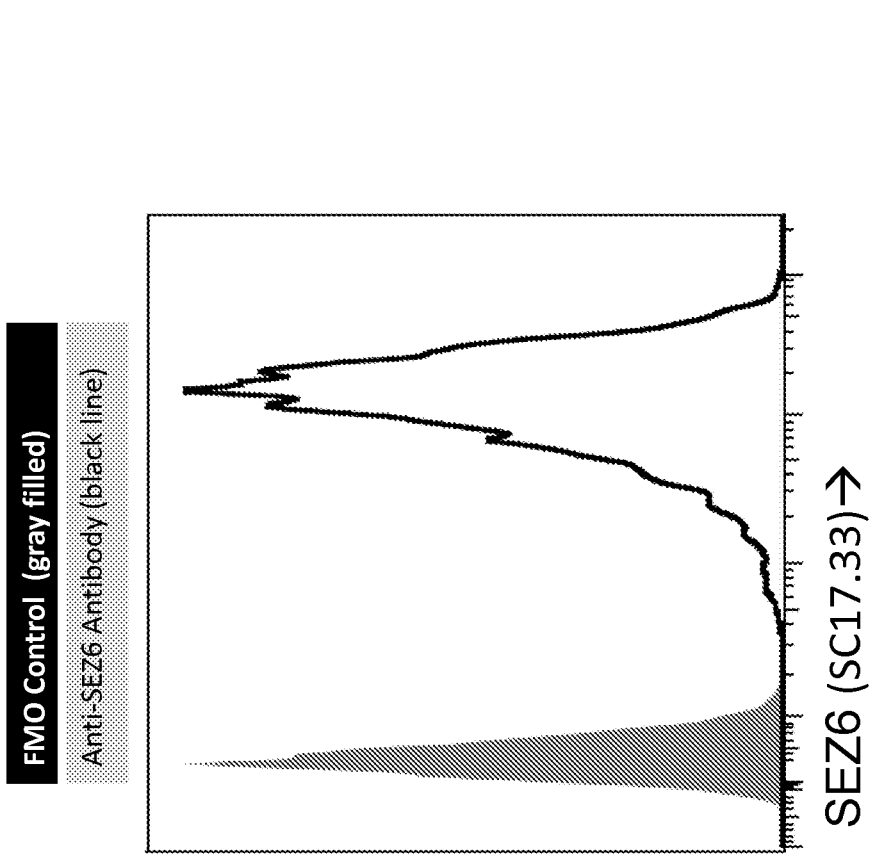

Detection of SEZ6 Surface
Expression on Engineered HEK-293T Cells
FMO Control (gray filled)
Anti-SEZ6 Antibody (black line)
SEZ6 (SC17.33)→

FIG. 12A

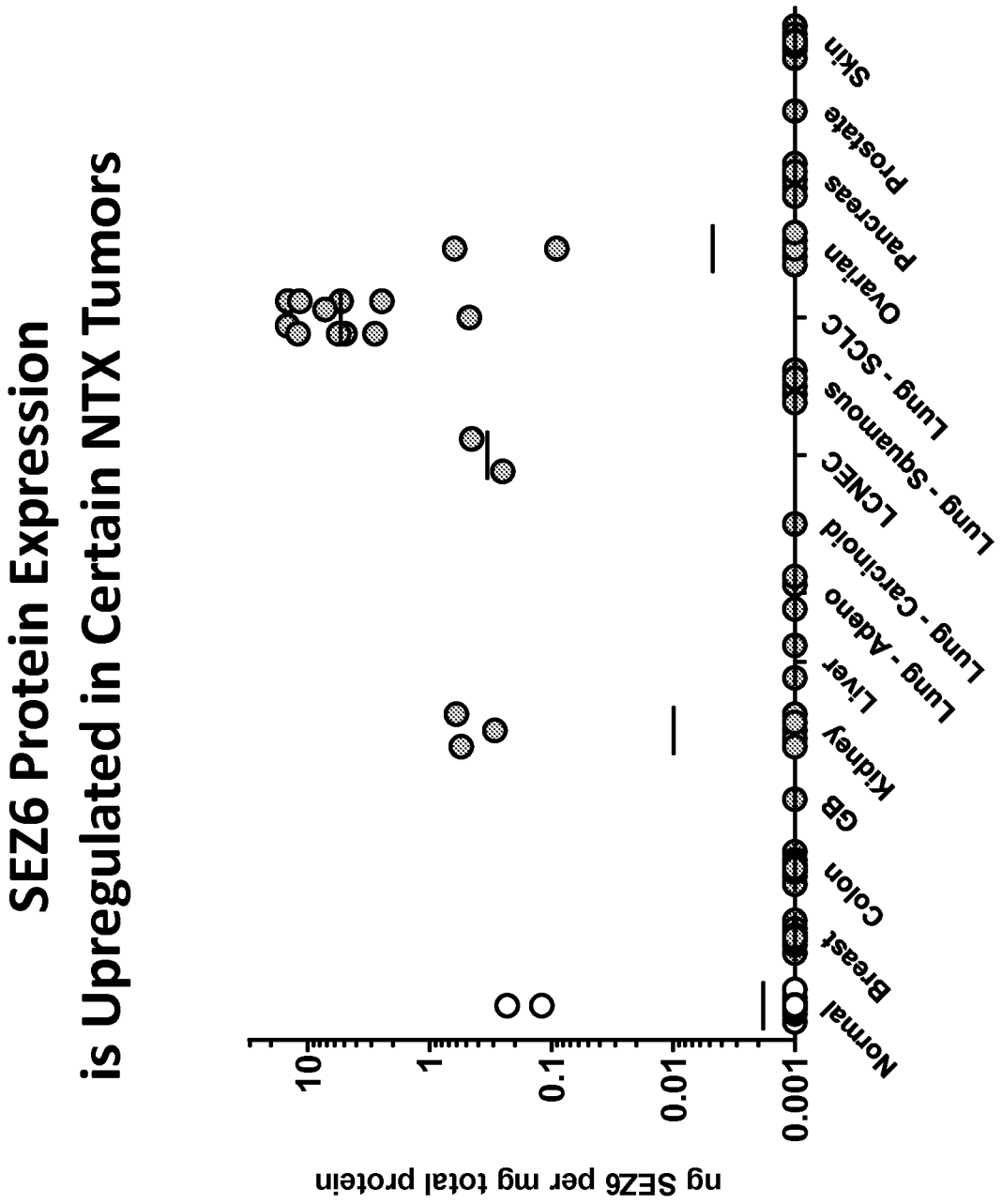
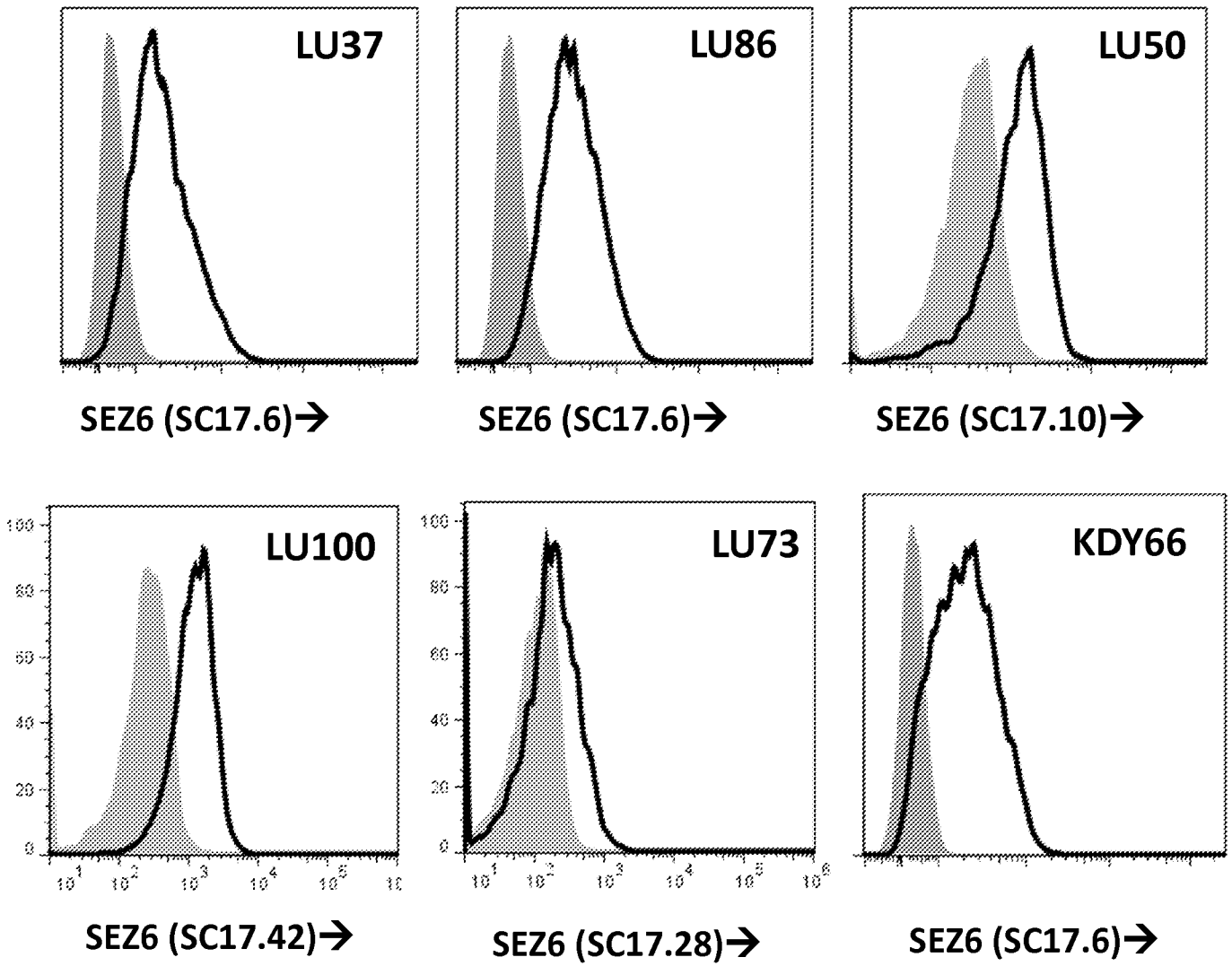

SEZ6 Protein Expression
is Upregulated in Certain NTX Tumors
ng SEZ6 per mg total protein
10
1
0.1
0.01
0.001
Normal
Breast
Colon
GB
Kidney
Liver
Lung - Adeno
Lung - Carcinoid
LCNEC
Lung - Squamous
Lung - SCLC
Ovarian
Pancreas
Prostate
Skin

FIG. 12B

Selected SEZ6 Modulators
Detect Surface Expression of SEZ6 in NTX Tumors



FMO (gray filled)
Anti-SEZ6 Antibody (black line)

Tumor Line	FMO (MFI)	Tumor (MFI)
LU37	29.4	199
LU86	95.1	810
LU50	37.3	300
LU100	289	1400
LU73	112	237
KDY66	22.6	192

FIG. 13A

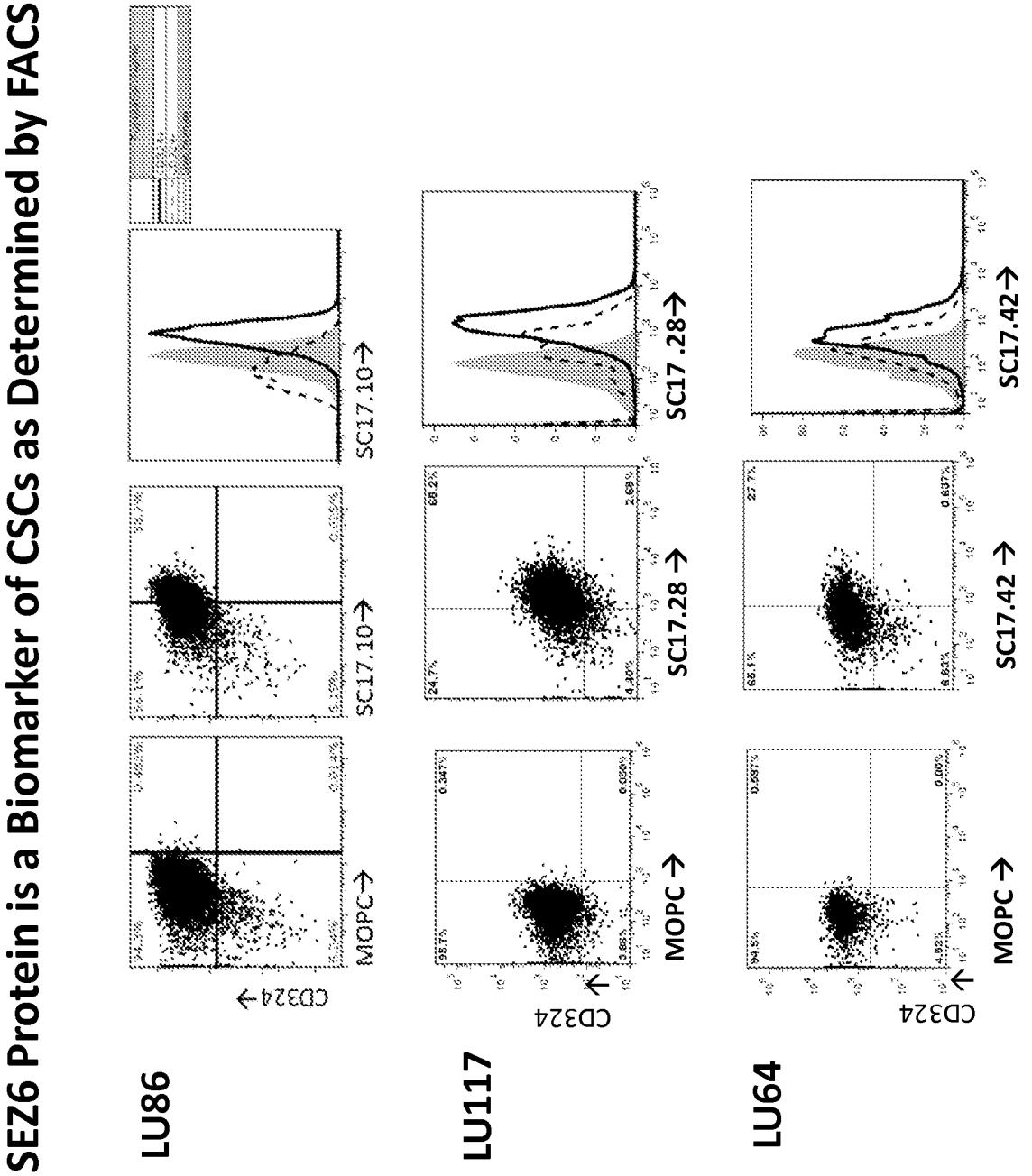

SEZ6 Protein is a Biomarker of CSCs as Determined by FACS
LU86
LU117
LU64
CD324
MOPC→
SC17.10→
SC17.28→
SC17.42→

FIG. 13B

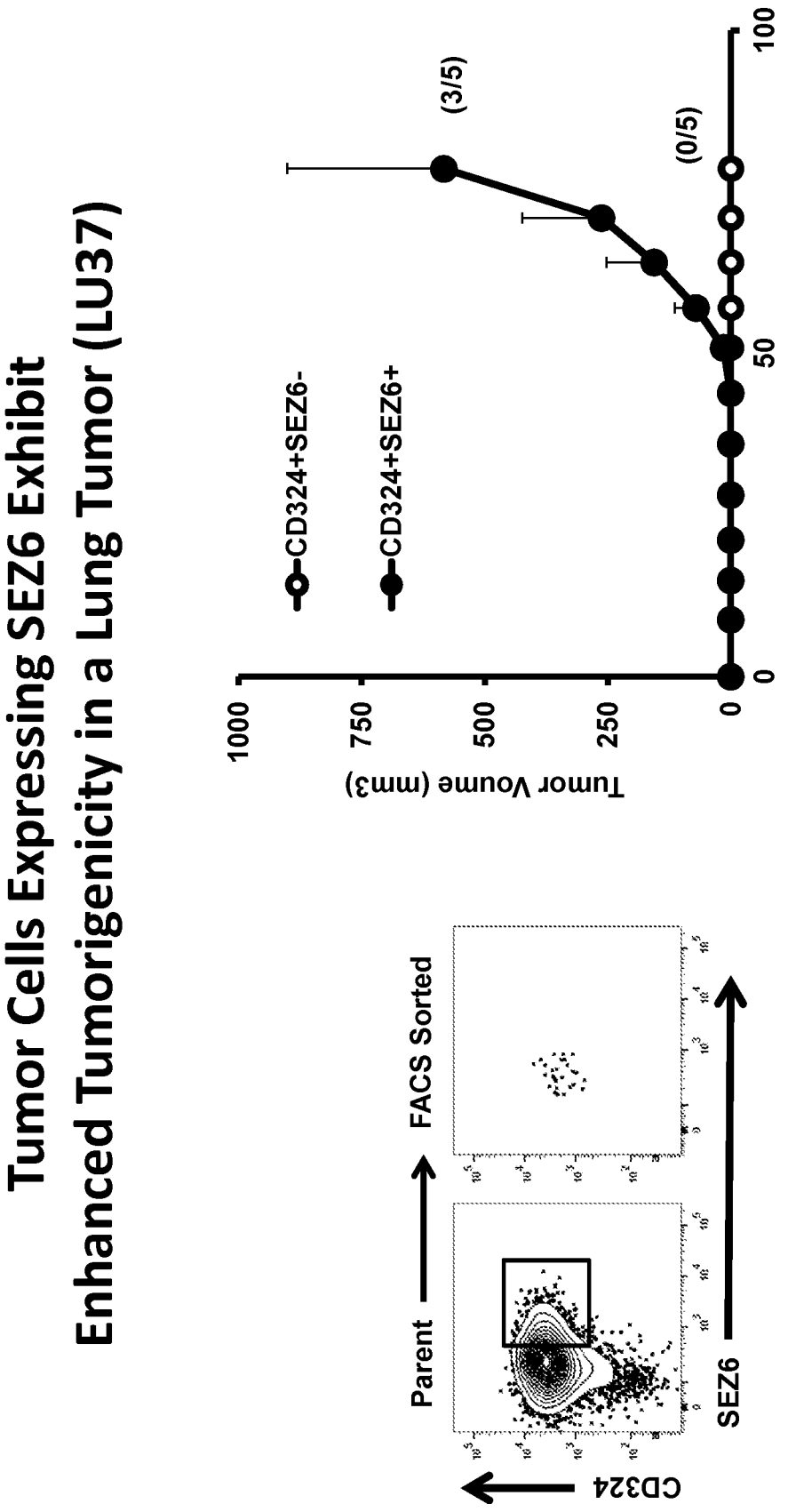


FIG. 14A

FIG. 14B

SEZ6 Modulators Facilitate Delivery of Cytotoxic Agents to SEZ6-Expressing HEK-293T Cells

Clone	100pM	50pM	10pM
IgG1	103.1	ND	94.3
IgG2a	97.3	100.4	94.7
IgG2b	102.3	ND	96.9
SC17.1	26.3	ND	70.1
SC17.3	16.9	ND	38.5
SC17.4	18.7	ND	34.7
SC17.6	8.8	ND	14.3
SC17.7	23.9	ND	49.4
SC17.8	15.2	ND	22.8
SC17.9	13.8	ND	24.4
SC17.10	56.6	ND	92.2
SC17.11	23.8	ND	64.5
SC17.12	112.4	ND	111.7
SC17.13	107.0	ND	103.4
SC17.14	34.9	ND	71.8
SC17.15	95.1	ND	110.6
SC17.17	11.3	12.8	21.4
SC17.18	59.3	ND	89.6
SC17.19	9.2	ND	14.4
SC17.21	36.4	ND	62.7
SC17.22	46.9	ND	68.9
SC17.23	13.3	ND	38.0
SC17.24	49.5	ND	77.5
SC17.25	58.7	ND	88.8
SC17.26	13.4	ND	15.6
SC17.27	21.7	ND	33.6
SC17.28	12.8	ND	17.9

Clone	100pM	50pM	10pM
SC17.29	112.4	ND	103.3
SC17.30	22.6	ND	50.0
SC17.31	47.0	ND	87.4
SC17.32	104.7	ND	122.9
SC17.33	10.4	ND	17.6
SC17.34	8.8	ND	16.7
SC17.35	15.9	ND	41.8
SC17.36	9.8	ND	12.9
SC17.37	78.4	ND	92.2
SC17.38	104.9	ND	104.8
SC17.39	121.7	ND	121.8
SC17.40	9.6	ND	11.3
SC17.41	60.3	ND	98.1
SC17.42	58.5	ND	91.7
SC17.43	21.5	ND	36.8
SC17.44	47.3	ND	86.3
SC17.45	11.1	ND	12.6
SC17.46	12.7	16.3	23.6
SC17.47	15.0	ND	39.2
SC17.49	21.3	ND	39.3
SC17.50	102.7	ND	109.9
SC17.51	105.4	ND	102.1
SC17.52	8.2	ND	8.6
SC17.53	111.6	ND	99.9
SC17.54	77.0	ND	99.6
SC17.55	11.0	ND	28.9
SC17.56	12.4	ND	16.5

Clone	100pM	50pM	10pM
SC17.57	111.7	ND	103.0
SC17.58	102.3	ND	95.1
SC17.59	111.4	ND	114.5
SC17.60	110.8	ND	101.2
SC17.61	114.0	ND	113.7
SC17.72	ND	101.3	ND
SC17.73	ND	96.4	ND
SC17.74	ND	105.1	ND
SC17.75	ND	108.3	ND
SC17.76	ND	99.6	ND
SC17.81	ND	62.8	ND
SC17.82	ND	97.7	ND
SC17.83	ND	95.4	ND
SC17.84	ND	107.8	ND
SC17.86	ND	111.7	ND
SC17.87	ND	100.9	ND
SC17.88	ND	97.8	ND
SC17.89	ND	17.0	ND
SC17.90	ND	105.4	ND
SC17.91	ND	104.0	ND
SC17.92	ND	107.4	ND
SC17.93	ND	106.3	ND
SC17.95	ND	113.0	ND
SC17.96	ND	53.5	ND
SC17.97	ND	111.9	ND
SC17.99	ND	18.8	ND
SC17.100	ND	97.0	ND

FIG. 15A

SEZ6 Modulators Facilitate Delivery of Cytotoxic Agents to SEZ6-Expressing HEK-293T Cells

Clone	100pM	50pM	10pM
SC17.101	ND	50.7	ND
SC17.102	ND	13.6	ND
SC17.103	ND	111.4	ND
SC17.104	ND	39.4	ND
SC17.105	ND	115.2	ND
SC17.106	ND	116.6	ND
SC17.107	ND	36.0	ND
SC17.108	ND	104.7	ND
SC17.109	ND	108.3	ND
SC17.112	ND	102.7	ND
SC17.114	ND	11.4	ND
SC17.115	ND	10.7	ND
SC17.116	ND	95.4	ND
SC17.117	ND	107.4	ND
SC17.119	ND	111.0	ND
SC17.120	ND	9.1	ND
SC17.121	ND	16.2	ND
SC17.122	ND	107.1	ND
SC17.124	ND	109.9	ND
SC17.125	ND	98.7	ND
SC17.129	ND	102.9	ND
SC17.130	ND	80.4	ND
SC17.133	ND	108.2	ND
SC17.134	ND	37.3	ND
SC17.135	ND	99.0	ND

Clone	100pM	50pM	10pM
SC17.136	ND	92.9	ND
SC17.137	ND	15.3	ND
SC17.138	ND	107.7	ND
SC17.140	ND	22.5	ND
SC17.142	ND	101.4	ND
SC17.143	ND	97.0	ND
SC17.145	ND	100.8	ND
SC17.146	ND	96.7	ND
SC17.147	ND	108.9	ND
SC17.149	ND	45.9	ND
SC17.151	ND	8.1	ND
SC17.154	ND	102.0	ND
SC17.155	ND	15.3	ND
SC17.156	ND	19.5	ND
SC17.161	ND	18.3	ND
SC17.162	ND	30.1	ND
SC17.163	ND	106.5	ND
SC17.166	ND	19.2	ND
SC17.167	ND	103.4	ND
SC17.168	ND	46.0	ND
SC17.169	ND	109.7	ND
SC17.170	ND	108.9	ND
SC17.173	ND	68.9	ND
SC17.175	ND	15.9	ND
SC17.176	ND	82.8	ND

Clone	100pM	50pM	10pM
SC17.177	ND	102.5	ND
SC17.178	ND	102.1	ND
SC17.179	ND	70.2	ND
SC17.180	ND	21.7	ND
SC17.181	ND	101.2	ND
SC17.182	ND	10.9	ND
SC17.184	ND	63.2	ND
SC17.186	ND	105.1	ND
SC17.187	ND	13.5	ND
SC17.188	ND	21.2	ND
SC17.189	ND	98.8	ND
SC17.190	ND	91.3	ND
SC17.191	ND	17.3	ND
SC17.192	ND	103.6	ND
SC17.193	ND	21.1	ND
SC17.195	ND	38.0	ND
SC17.196	ND	106.8	ND
SC17.197	ND	7.0	ND
SC17.198	ND	108.0	ND
SC17.199	ND	21.0	ND
SC17.200	ND	9.9	ND
SC17.201	ND	40.1	ND
SC17.203	ND	96.2	ND
SC17.204	ND	114.1	ND

FIG. 15A (Cont.)

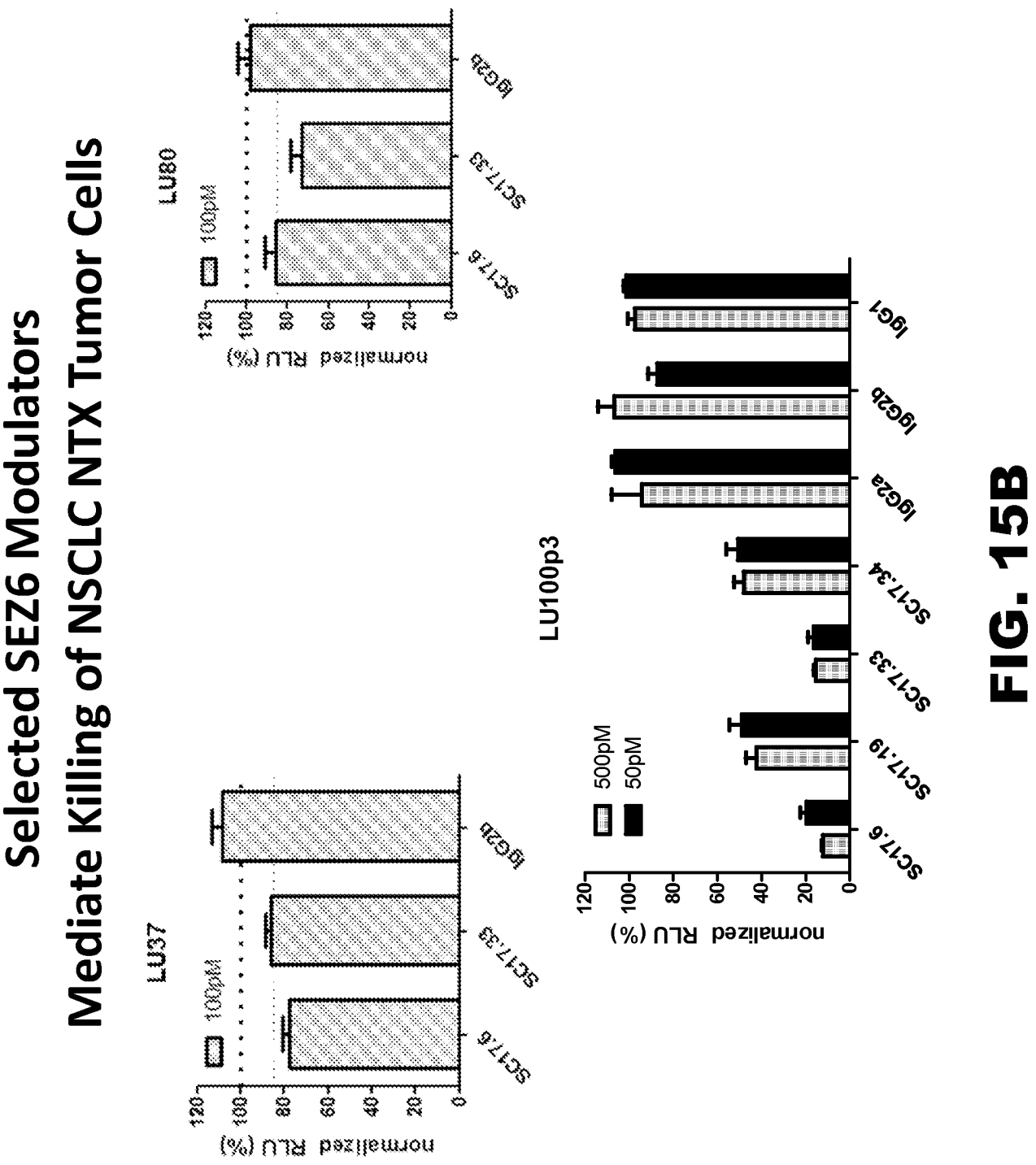

Selected SEZ6 Modulators
Mediate Killing of NSCLC NTX Tumor Cells
LU37
100pM
normalized RLU (%)
120
100
80
60
40
20
0
SC17.6
SC17.33
IgG2b
LU80
100pM
normalized RLU (%)
SC17.6
SC17.33
IgG2b
LU100p3
500pM
50pM
normalized RLU (%)
SC17.6
SC17.19
SC17.33
SC17.34
IgG2a
IgG2b
IgG1

FIG. 15B

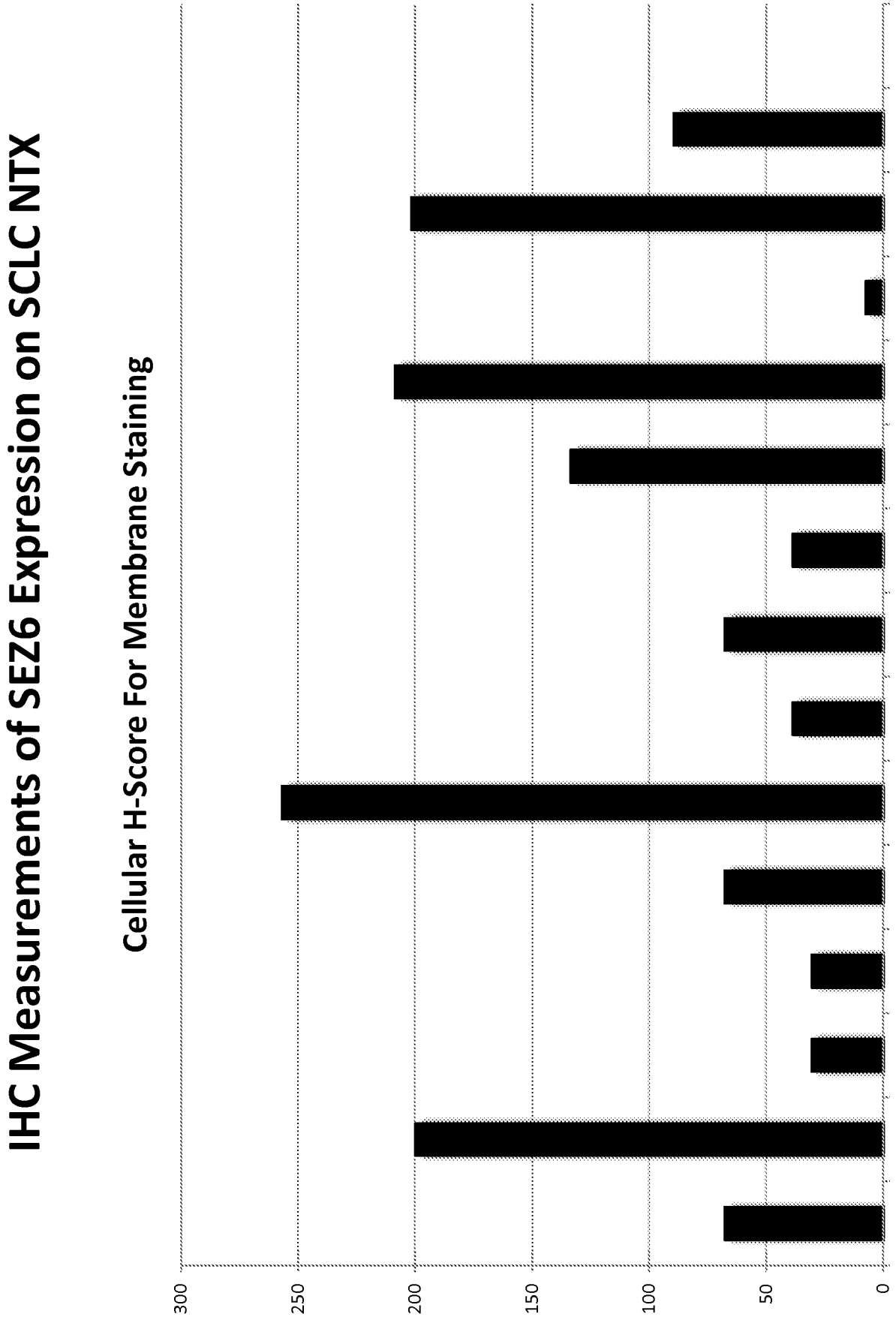

IHC Measurements of SEZ6 Expression on SCLC NTX
Cellular H-Score For Membrane Staining
300
250
200
150
100
50
0
LU100
LU102
LU124
LU126
LU148
LU149
LU150
LU181
LU195
LU64
LU73
LU80
LU86
LU95

FIG. 16A

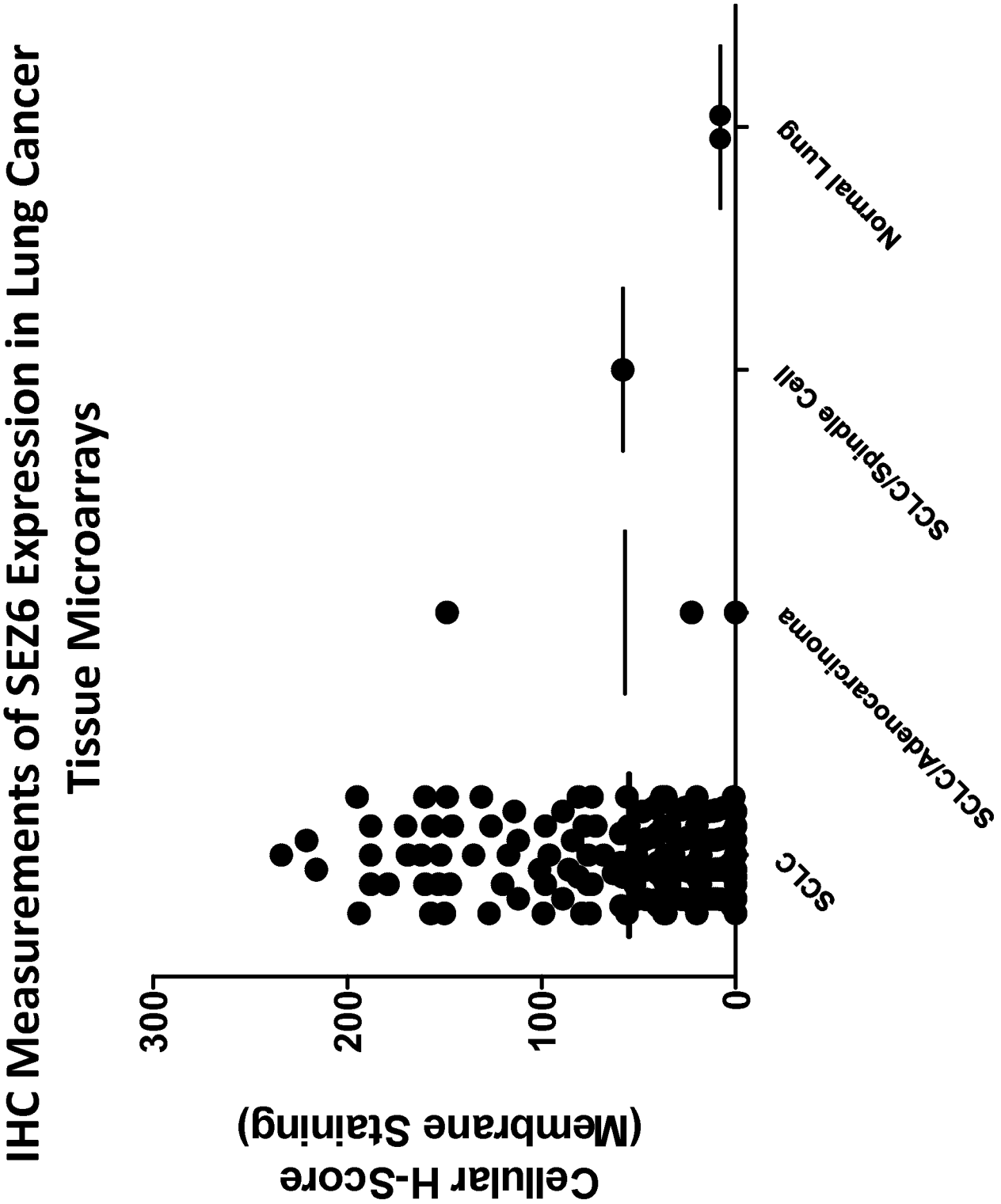

IHC Measurements of SEZ6 Expression in Lung Cancer Tissue Microarrays
Cellular H-Score (Membrane Staining)
300
200
100
0
SCLC
SCLC/Adenocarcinoma
SCLC/Spindle cell
Normal Lung

FIG. 16B

IHC Measurement of SEZ6 Expression in Medullary Thyroid Tumors

	Mouse IgG2a	Mouse IgG1	SC17.140
Patient 1	-	-	+, 10%,
Patient 2	-	-	+/++, 90%,
Patient 3	-	-	++, 40%,
Patient 4	-	-	+++, 80%,
Patient 5	-	-	++, 80%,
Patient 6	-	-	-/+, 10%,
Patient 8	-	-	++, 90%
Patient 9	-	-	++, 75%
Patient 10 (Thy1p0MET)	-	ND	+++, 95%,

FIG. 16C

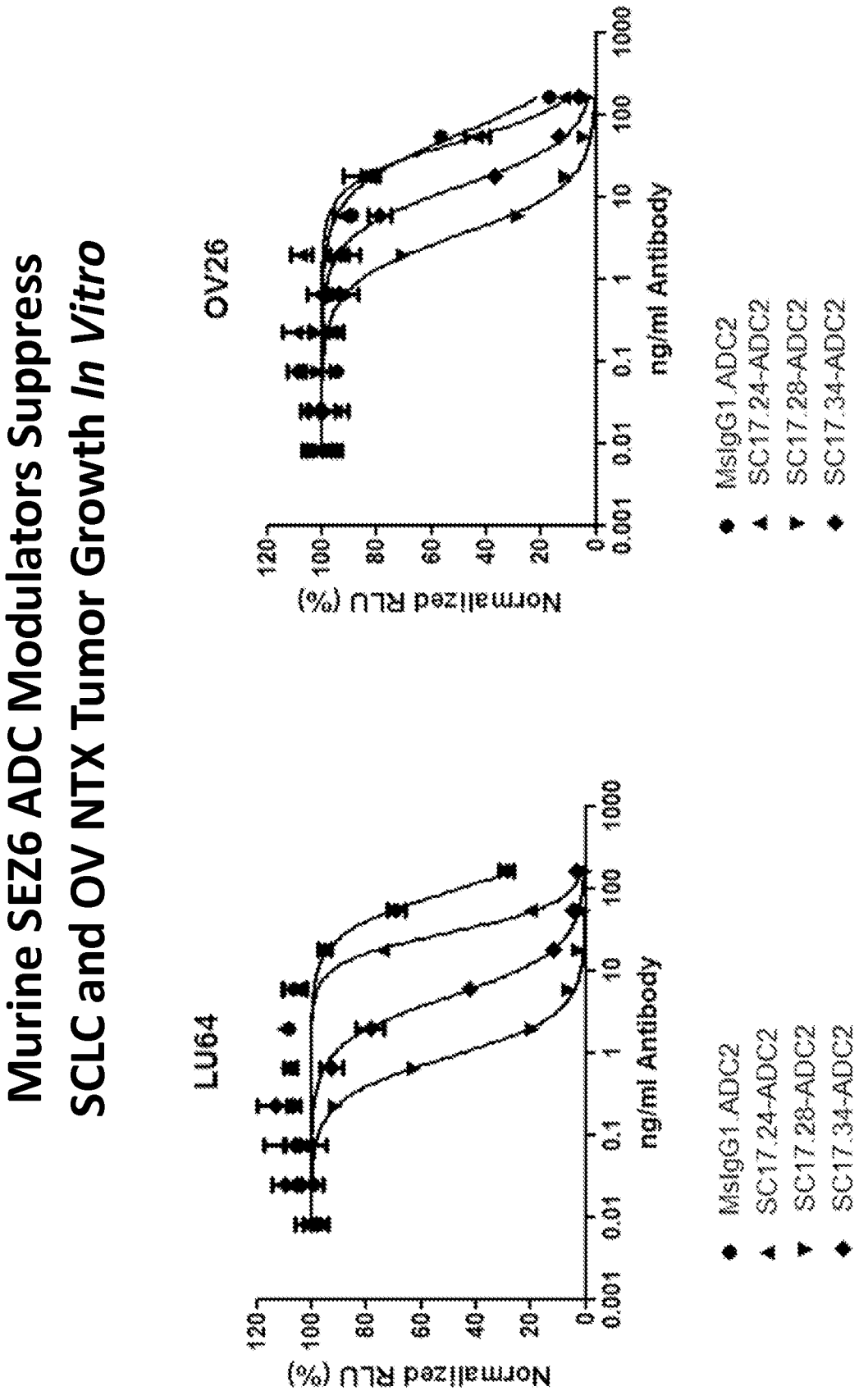

Murine SEZ6 ADC Modulators Suppress
SCLC and OV NTX Tumor Growth *In Vitro*
LU64
OV26
Normalized RLU (%)
ng/ml Antibody
MsIgG1.ADC2
SC17.24-ADC2
SC17.28-ADC2
SC17.34-ADC2

FIG. 17A

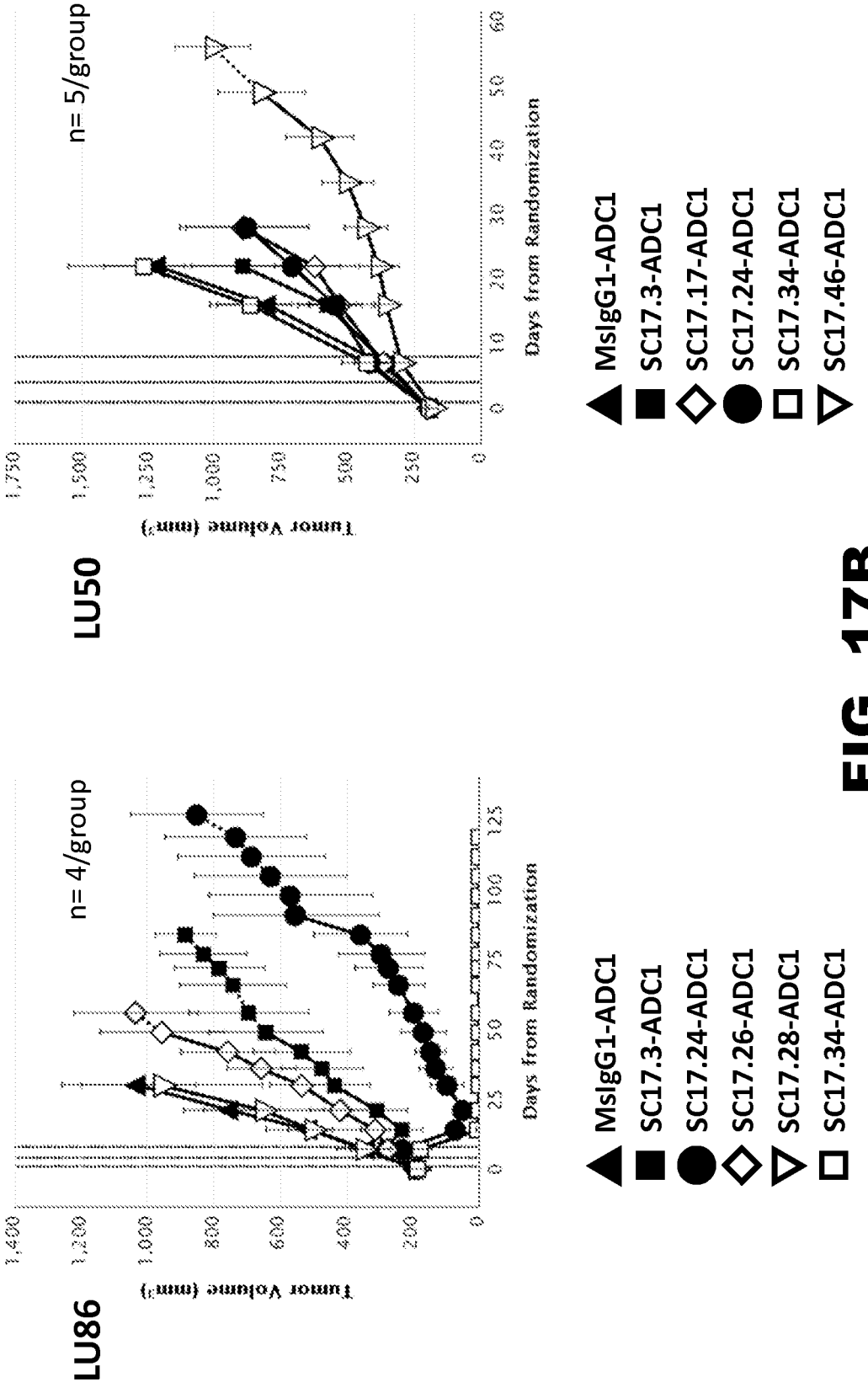

Murine SEZ6 ADC Modulators Suppress SCLC and NSCLC NTX Tumor Growth *In Vivo*
LU86
n= 4/group
Tumor Volume (mm³)
Days from Randomization
MsIgG1-ADC1
SC17.3-ADC1
SC17.24-ADC1
SC17.26-ADC1
SC17.28-ADC1
SC17.34-ADC1
LU50
n= 5/group
Tumor Volume (mm³)
Days from Randomization
MsIgG1-ADC1
SC17.3-ADC1
SC17.17-ADC1
SC17.24-ADC1
SC17.34-ADC1
SC17.46-ADC1

FIG. 17B

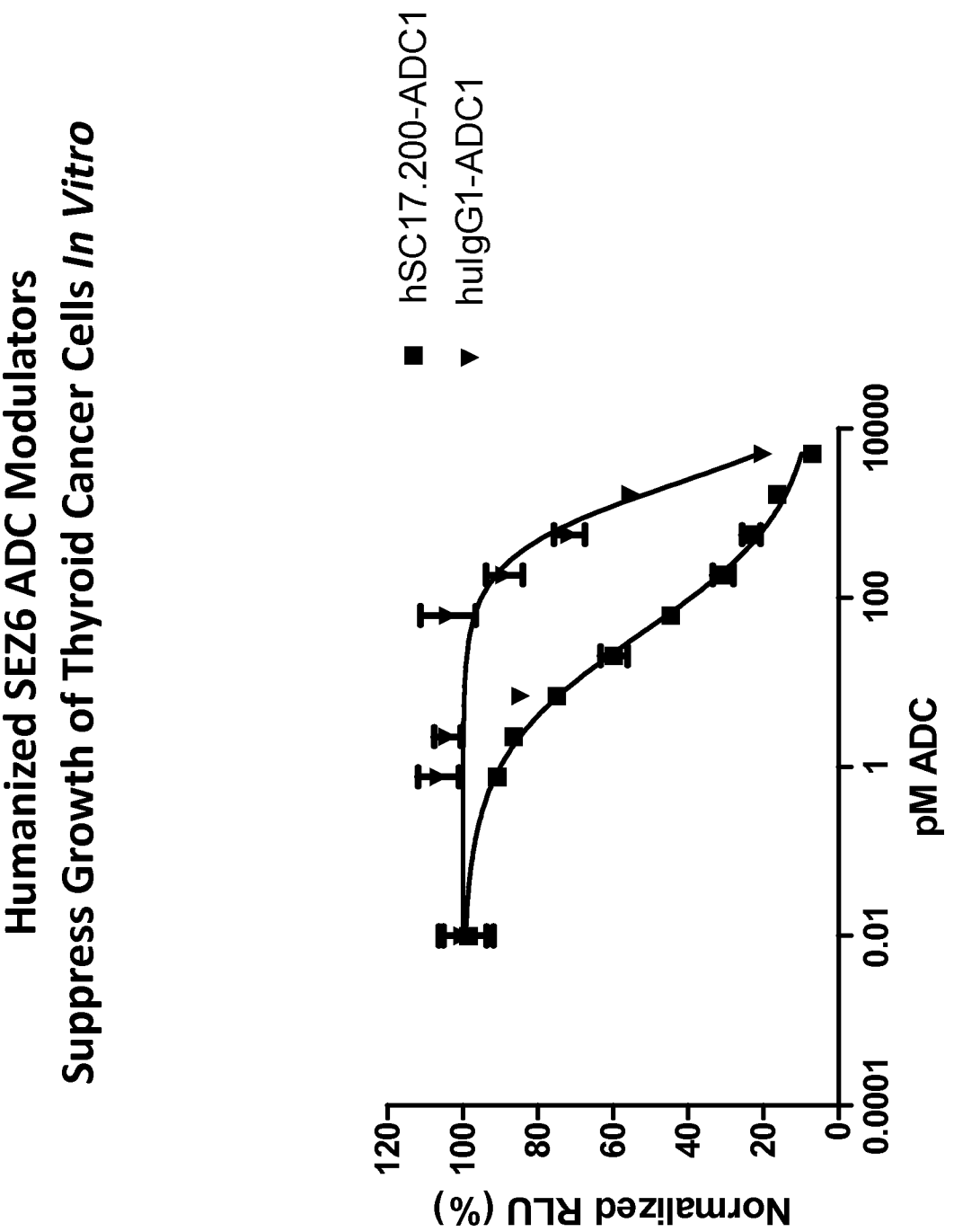

Humanized SEZ6 ADC Modulators
Suppress Growth of Thyroid Cancer Cells *In Vitro*
hSC17.200-ADC1
huIgG1-ADC1
Normalized RLU (%)
120
100
80
60
40
20
0
0.0001
0.01
1
100
10000
pM ADC

FIG. 18A

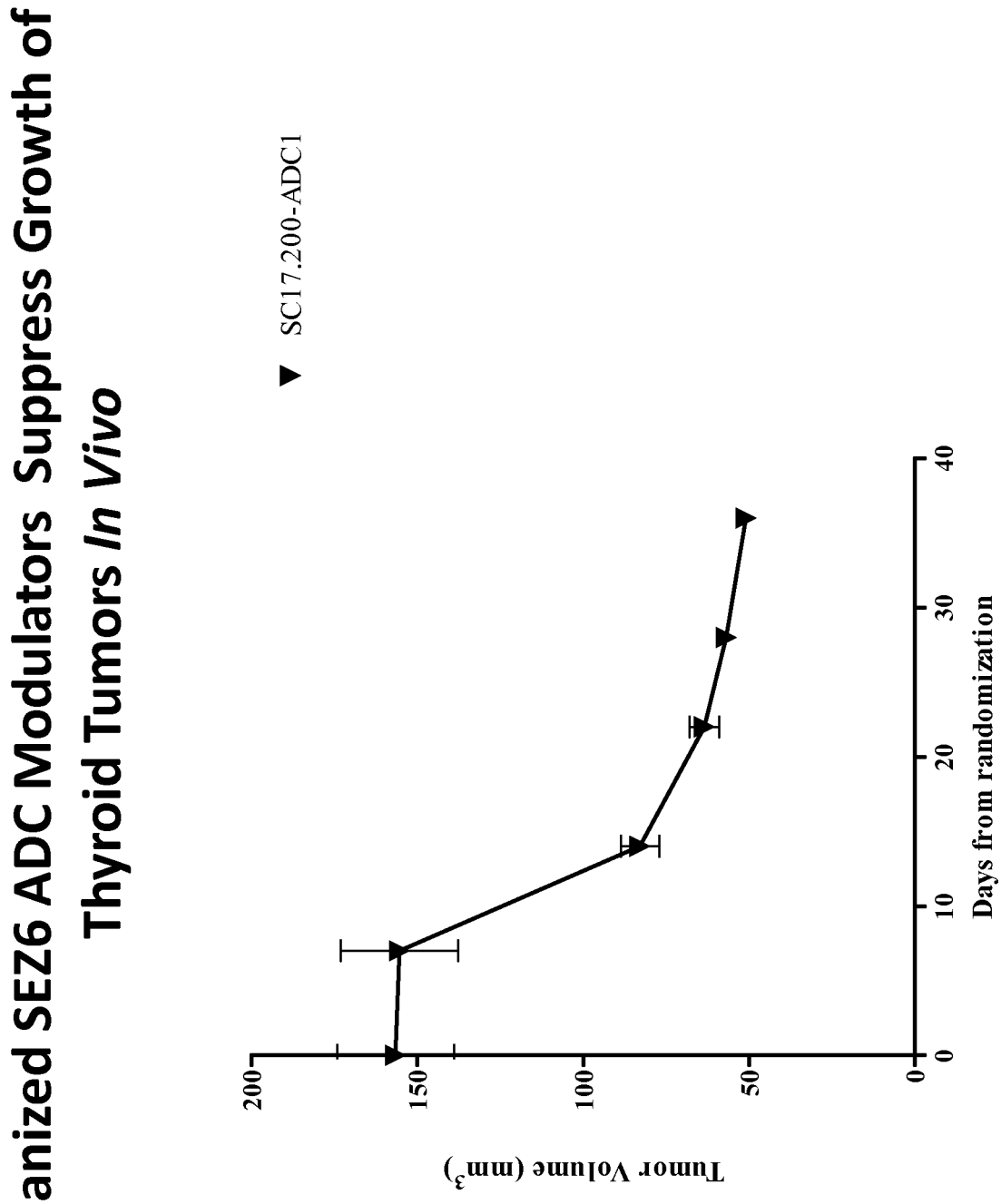

Humanized SEZ6 ADC Modulators Suppress Growth of Thyroid Tumors *In Vivo*
SC17.200-ADC1
Tumor Volume (mm³)
200
150
100
50
0
0
10
20
30
40
Days from randomization

FIG. 18B

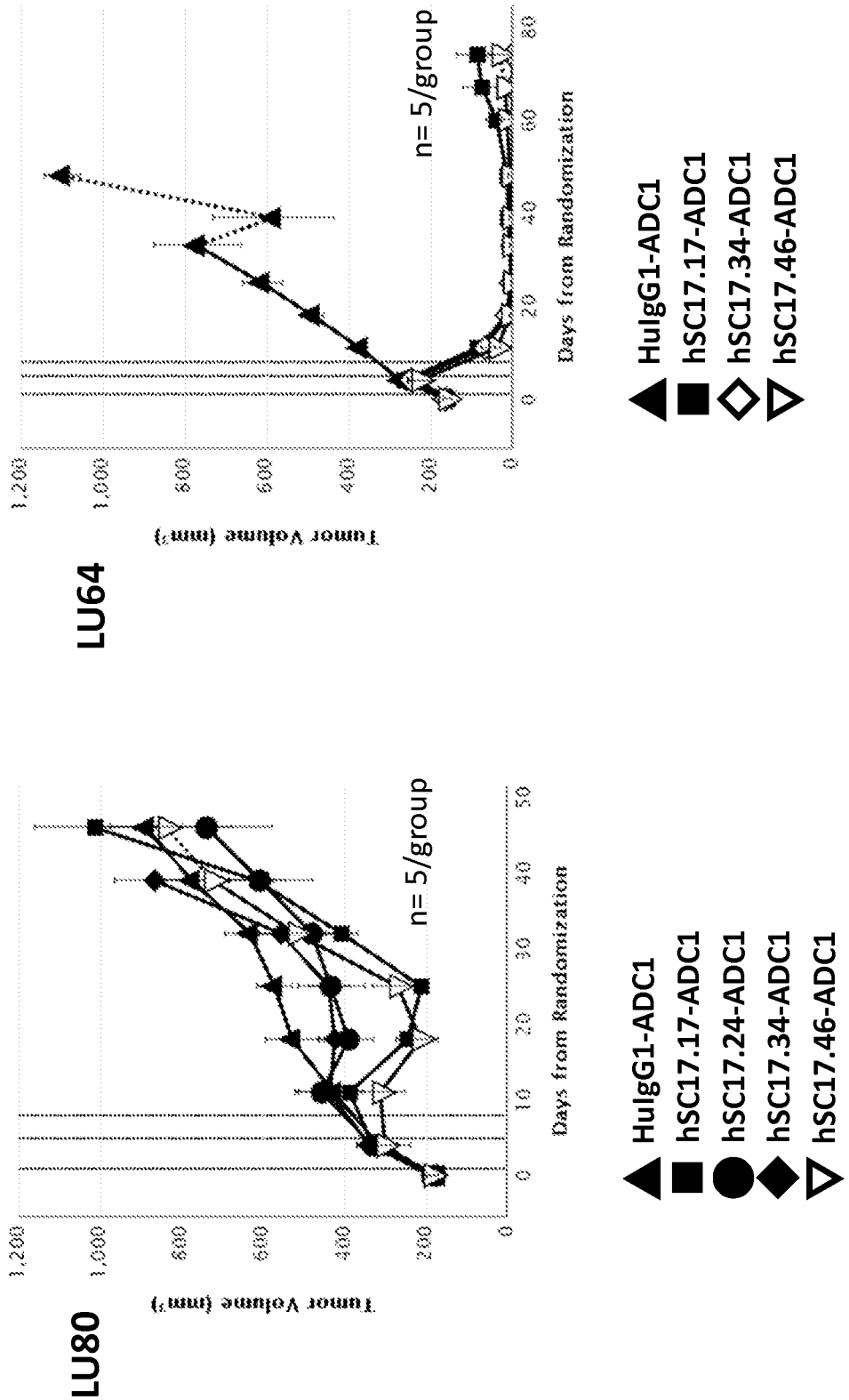

Humanized SEZ6 ADC Modulators
Suppress SCLC NTX Tumor Growth In Vivo
LU80
LU64
Tumor Volume (mm³)
Days from Randomization
n= 5/group
HulgG1-ADC1
hSC17.17-ADC1
hSC17.24-ADC1
hSC17.34-ADC1
hSC17.46-ADC1

FIG. 18C

Humanized SEZ6 ADC Modulators Show Differential Efficacy on SCLC NTX Tumor Growth *In Vivo*

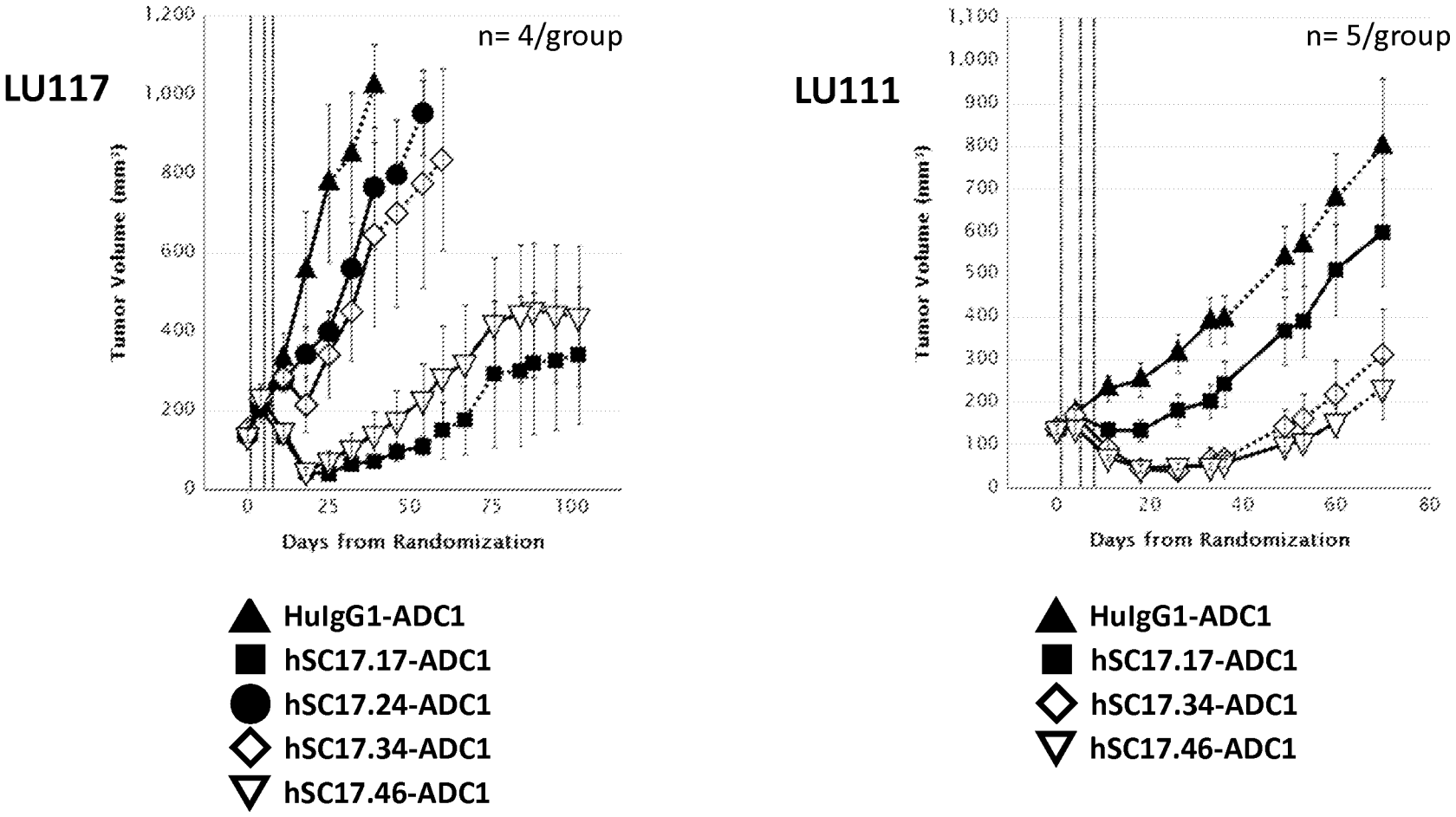


FIG. 18D

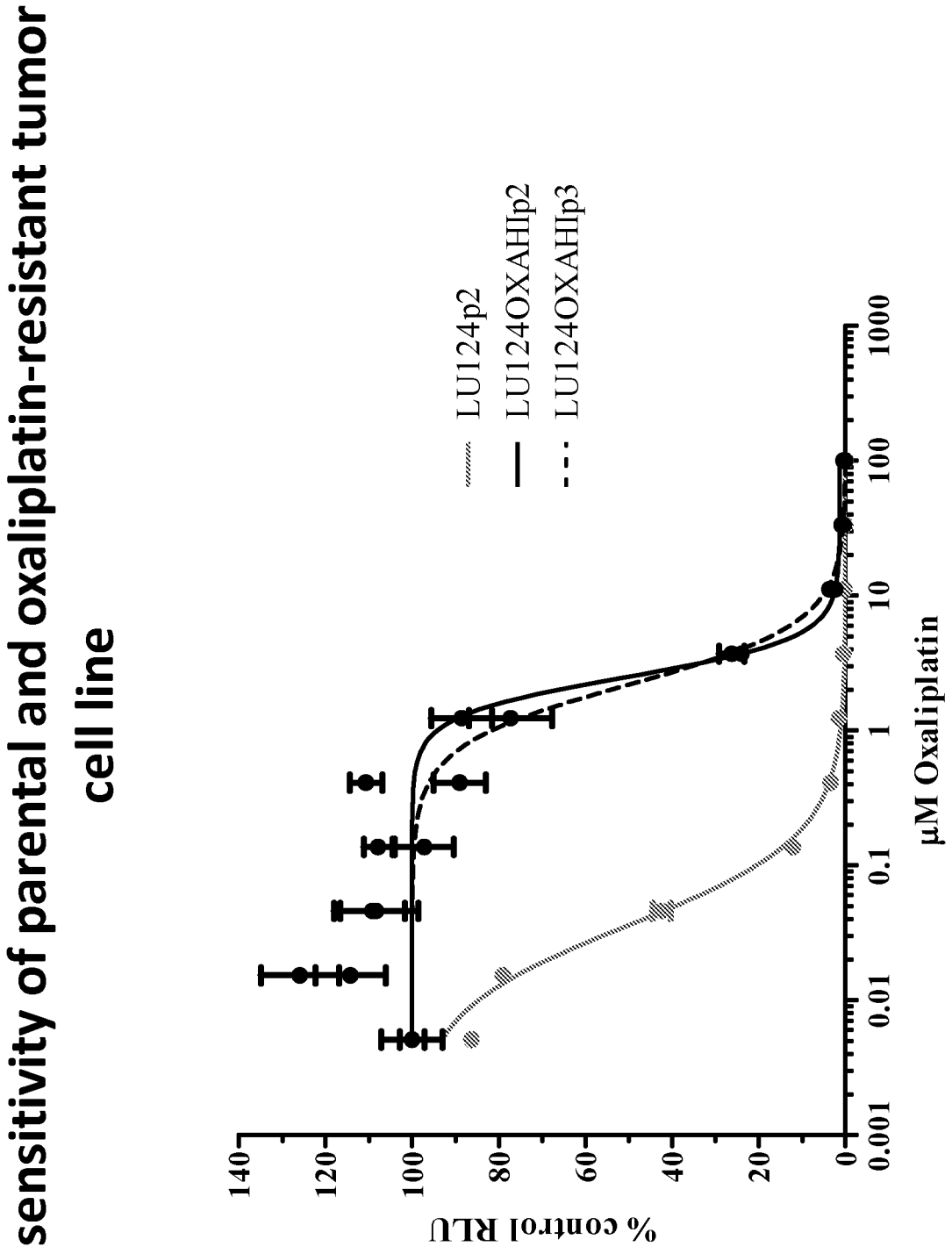

In vitro sensitivity of parental and oxaliplatin-resistant tumor cell line
LU124p2
LU124OXAHIp2
LU124OXAHIp3
% control RLU
140
120
100
80
60
40
20
0
0.001
0.01
0.1
1
10
100
1000
µM Oxaliplatin

FIG. 19

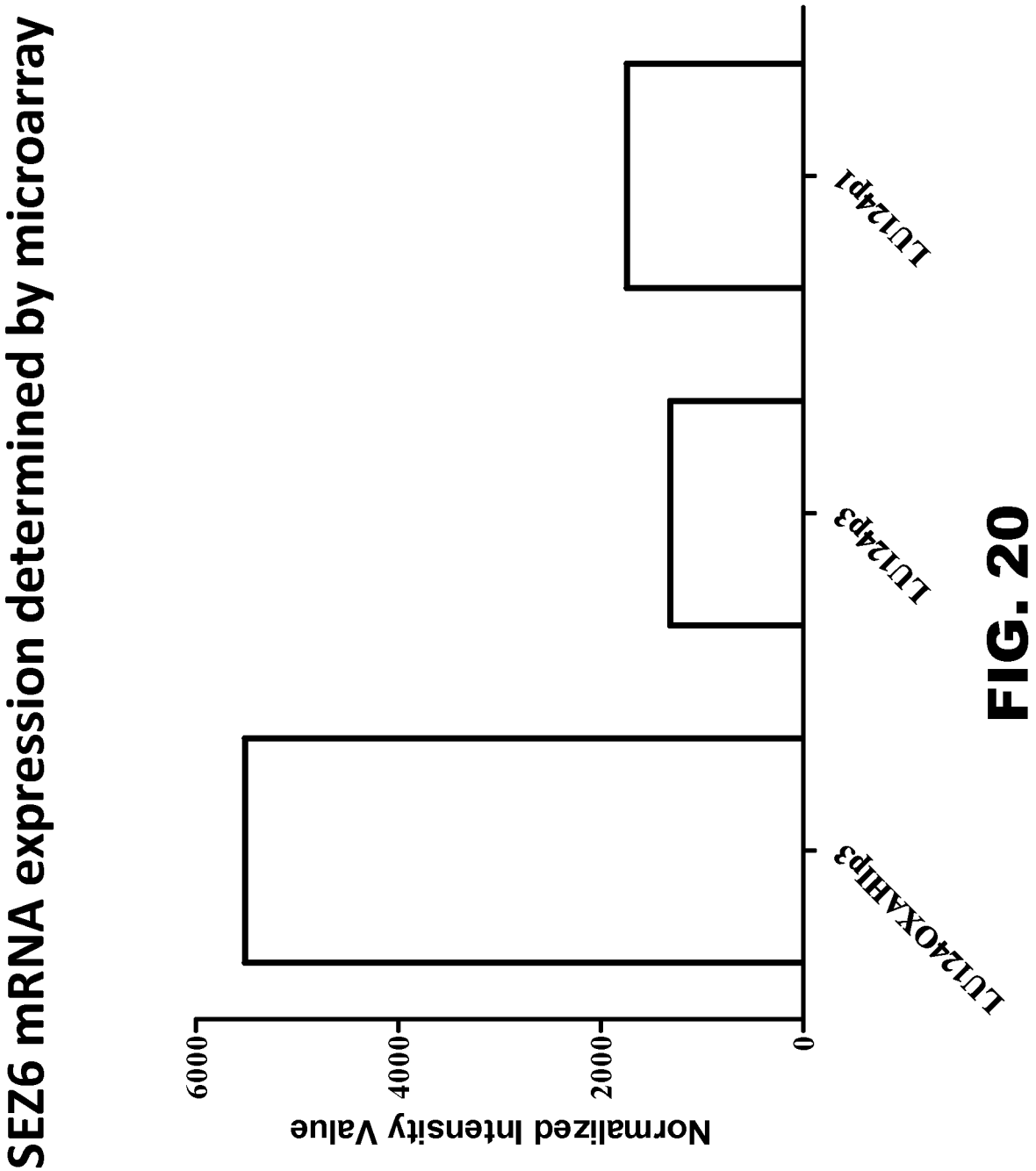

SEZ6 mRNA expression determined by microarray
Normalized Intensity Value
0
2000
4000
6000
LU124OXAH1p3
LU124p3
LU124p1

FIG. 20

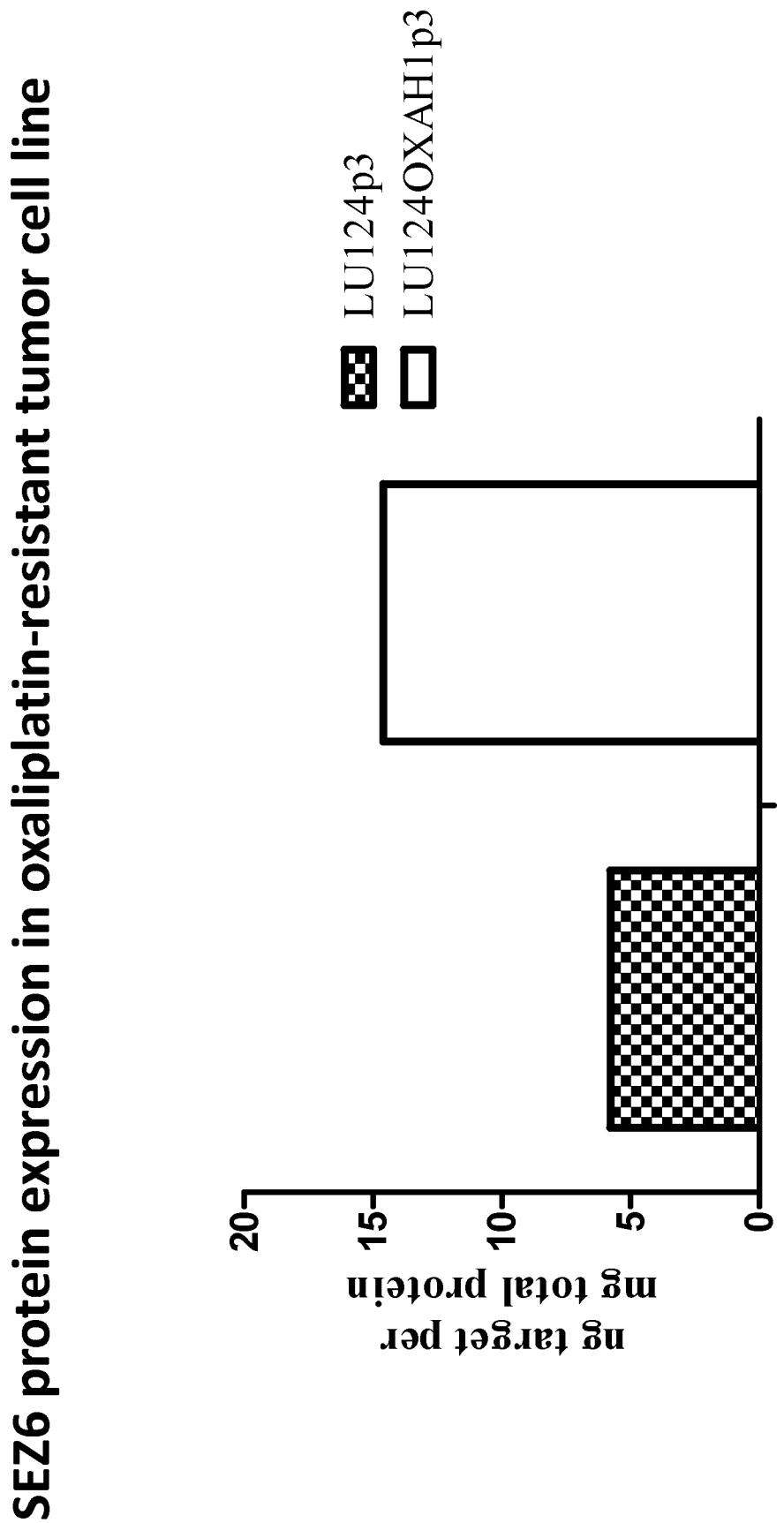

SEZ6 protein expression in oxaliplatin-resistant tumor cell line
LU124p3
LU124OXAH1p3
ng target per mg total protein
0
5
10
15
20
SEZ6

FIG. 21