

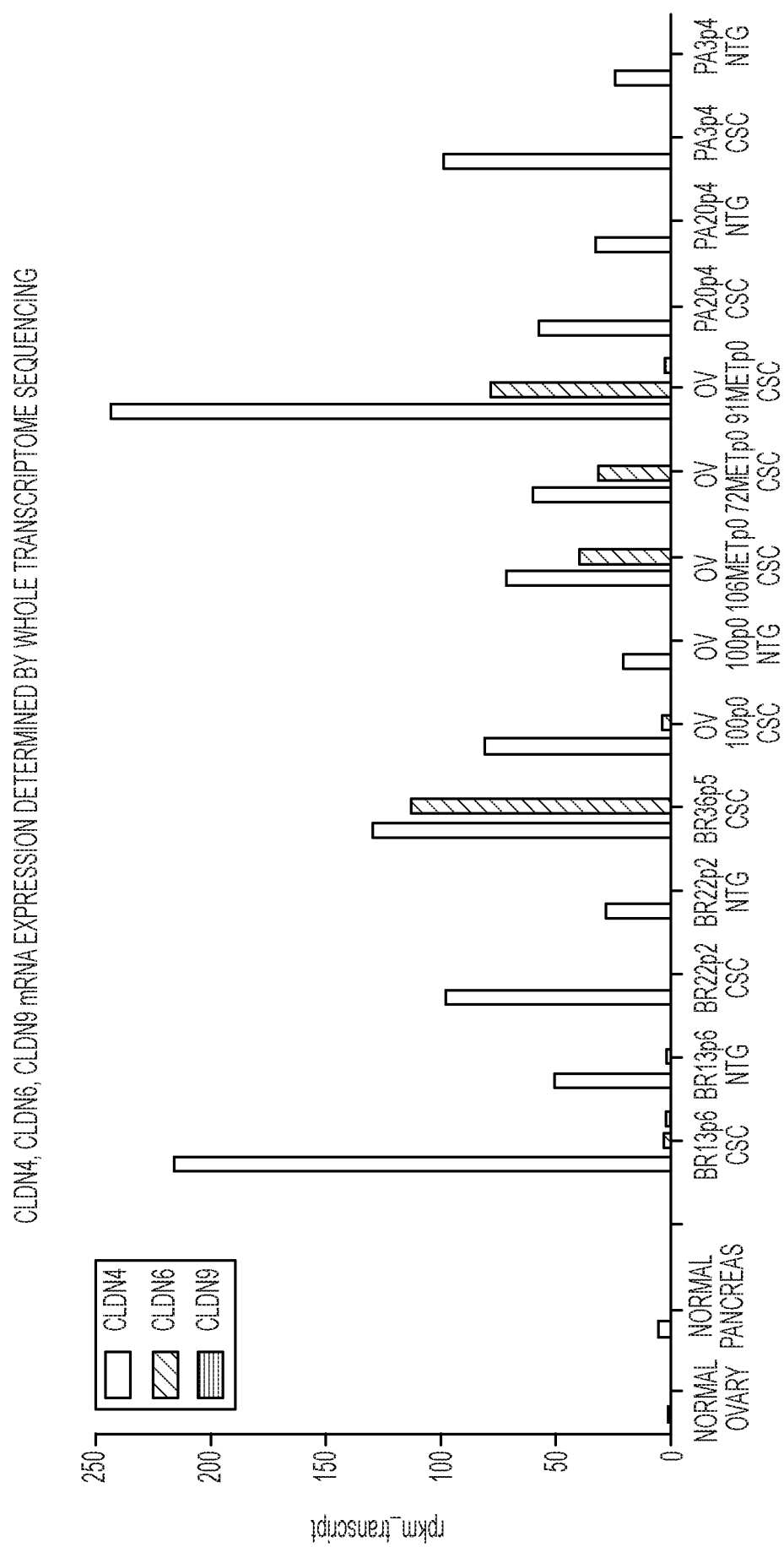


FIG. 1

Human CLDN Family: Protein Relationships

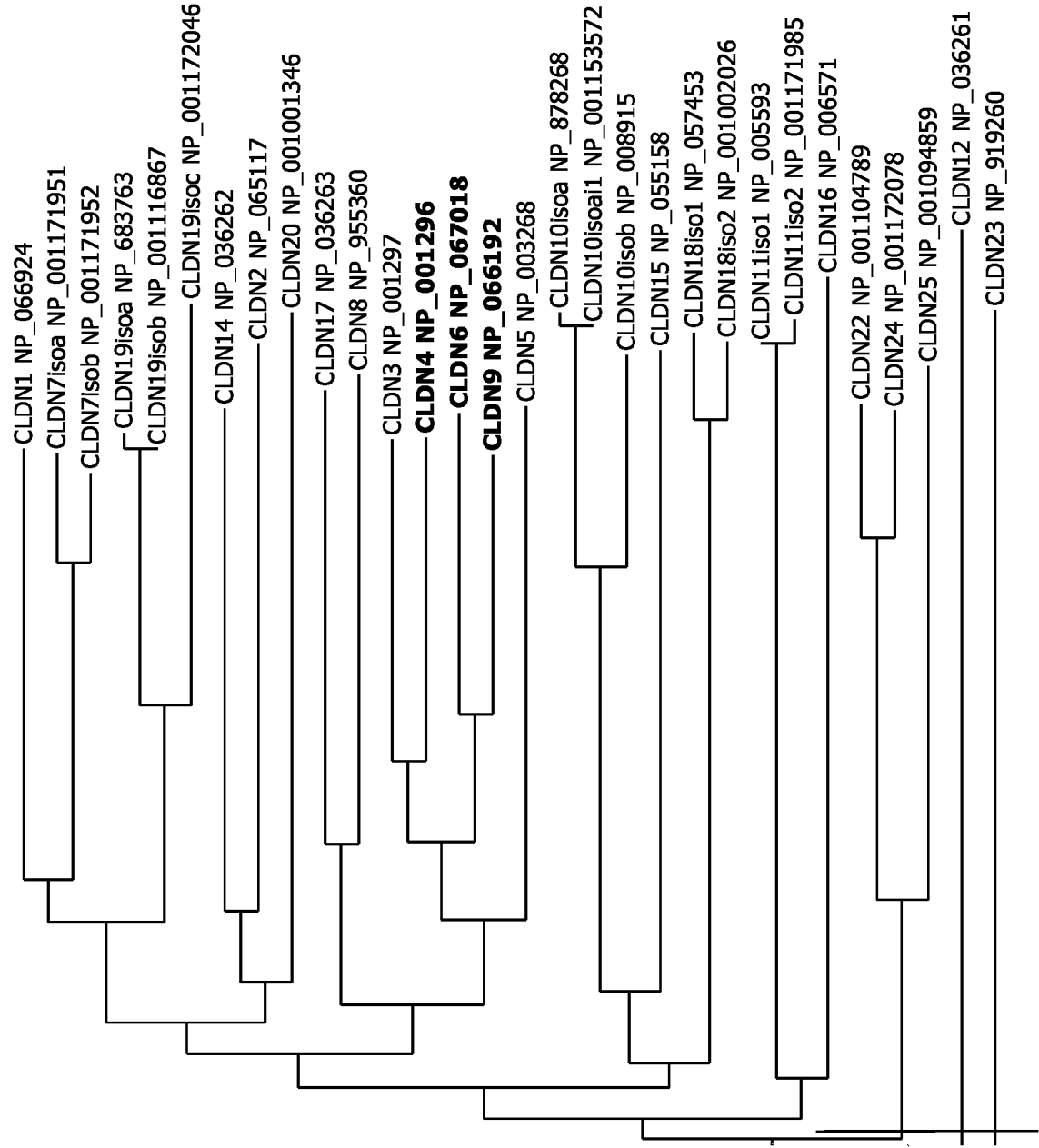


FIG. 2A

Percent Homology: Human CLDN4, CLDN6 and CLDN9 ECDs

Percent identity ECD loop 1	Percent identity ECD loop 2	
	humCLDN4 (53aa)	humCLDN9 (53aa)
	humCLDN6 (53aa)	humCLDN4 (53aa)
humCLDN6 (53aa)	84.9%	98.1%
humCLDN4 (53aa)		83.0%
	humCLDN6 (23aa)	humCLDN9 (23aa)
	humCLDN4 (23aa)	

FIG. 2B

Percent Homology of ECDs for Various CLDN Ortholog Proteins

ECD loop 1	cynoCLDN6	musCLDN6 NP_061247	ratCLDN6 NP_001095834
humCLDN6 NP_067018	100.0%	98.00%	98.00%
musCLDN6 NP_061247			99.00%

ECD loop 1	cynoCLDN9	musCLDN9 NP_064689	ratCLDN9 NP_001011889
humCLDN9 NP_006192	100.0%	100.0%	100.0%
musCLDN9 NP_064689			100.0%

ECD loop 1	cynoCLDN4	musCLDN4 NP_034033	ratCLDN4 NP_001012022
humCLDN4 NP_001296	100.0%	92.31%	92.31%
musCLDN4 NP_034033			100.0%

ECD loop 2	cynoCLDN6	musCLDN6 NP_061247	ratCLDN6 NP_001095834
humCLDN6 NP_067018	100.0%	86.96%	91.30%
musCLDN6 NP_061247			95.65%

ECD loop 2	cynoCLDN9	musCLDN9 NP_064689	ratCLDN9 NP_001011889
humCLDN9 NP_006192	100.0%	100.0%	100.0%
musCLDN9 NP_064689			100.0%

ECD loop 2	cynoCLDN4	musCLDN4 NP_034033	ratCLDN4 NP_001012022
humCLDN4 NP_001296	100.0%	86.96%	91.30%
musCLDN4 NP_034033			95.65%

FIG. 2C

Anti-CLDN Murine Antibody Light Chain Variable Region Amino Acid Sequences

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
SC27.1	DIQMTQSSSSFSVSLGDRVITTC	KASEDIYNRLA	WYQQKPGNAPRLIIS	GATSLET	GTPSRFSGSGSGKDYLITSLTSLRTEDAATYYC	QQYWSSTPLT	FGGTGKLEIK	21
SC27.22	DIVLTQSPASLAVSLGQRATISC	RASQTVSTSSVSVMH	WFQQKPGQPPLLIK	FASNVES	GVPARFSGSGSGDFTLNHPVEEEDISTYYC	QHSWEIPWT	FGGTGKLEIK	25
SC27.103	QIVLTQSPAIMSASLGERTVMT	TASSSVSSSYLH	WYQQKPGSSPTLWY	RTSDLAS	GVPARFSGSGSGTSYSLTISMEAEADAATYYC	HQYHRSPT	FGGTRLEIK	29
SC27.104	DIQMTQSSSSFSVSLGDRVITTC	KASEDIYNRLA	WYQQKPGNAPRLIIS	GATSLET	GVPARFSGSGSGKDYLITSLTSLQTEDVATYYC	QQYWSNPPT	FGGTGKLEIK	33
SC27.105	DVQMTQSPSSLSASLGERVSLTC	QASQSVSNILN	WYQTPGKAPRLIY	GASKLED	GVSSRFSGTGYGTDFTFTISSLEEEDVATYFC	LQHYRLMT	FGGTGKLEIK	37
SC27.106	DIQMTQSSSSFSVSLGDRVITTC	KASEDIYNRLA	WYQQKPGNAPRLIIC	GATSLET	GVPARFSGSGSGKDYLITSLTSLQTEDVATYYC	QQYWSSTPLT	FGGTGKLEIK	41
SC27.108	EIVLTQSPALMAASPGEKVITTC	SVSSSISSSNLH	WYQQKSGTSPKLWY	GTSNLAS	GVPVRFSGSGSGTSYSLTISNWEAEADAATYYC	QQWSSYPHT	FGGTGKLEIK	45
SC27.201	DIQMTQSSSSFSVSLGDRVITTC	KASEDIYNRLA	WYQQKPGNAPRLIIS	GATSLEA	GVPARFSGSGSGKDYLITSLTSLQTEDVATYYC	QQYWSSTPPT	FGGTGKLEIK	49
SC27.203	DIQMTQSSSSFSVSLGDRVITTC	KASEDIYNRLA	WYQQNPNTPRLLMS	GATSLET	GVPARFSGSGSGKDYLITSLTSLQIEDVSTYYC	QQYWSSTPPT	FGGTRLEIK	53
SC27.204	DIVMTQSQFMSVSGDRVSVAC	KAGQNVGTSVA	WYQQKPGHSPKSLIY	SASRYYS	GVPNRFSGSGSGDFTLTISNWEAEADAATYYC	QQYITPYT	FGGTGKLEII	57

FIG. 3A

Anti-CLDN Humanized Antibody Light Chain Variable Region Amino Acid Sequences

Name	FR1	CDRL1	FR2	CDRL2	FR3	CDRL3	FR4	SEQ ID NO
hSC27.1	DIQMTQSPSSVSASVGDRTITC	KASEDIYNRLA	WYQQKPGKAPKLLIY	GATSLET	GVPSTRFSGSGSDTDYTLTISSIQPEDFATYYC	QQYWSSTPLT	FGQGTKLEIK	61
hSC27.22	DIVMTQSPDLSAVSLGERATINC	RASQTVSTSSSYMH	WYQQKPGQPPKLLIY	FASNVES	GVPDRFSGSGSDTFTLTISSLQAEDVAVYYC	QHSWEIPWT	FGQGTKLEIK	65
hSC27.108	EIVLTQSPATLSLSPGERATLSC	SVSSSISSSNLH	WYQQKPGQAPRLLIY	GTSNLAS	GTPARFSGSGSDTFTLTISSLPEPEFAVYYC	QQWSSYPHT	FGGGTKVEIK	69
hSC27.204	DIQMTQSPSSLASVGDRTITC	KAGQNVGTSVA	WFQQKPGKAPKSLIY	SASYRYS	GVPSTRFSGSGSDTFTLTISSLQPEDFATYYC	QQYITYPYT	FGGGTKVEIK	73
hSC27.108v1	EIVLTQSPDFQSVTPKEKVTITC	SVSSSISSSNLH	WYQQKPDQSPKLLIY	GTSNLAS	GVPSTRFSGSGSDTFTLTINSLEAEDAATYYC	QQWSSYPHT	FGGGTKVEIK	77

FIG. 3A Cont.

Anti-CLDN Murine Antibody Heavy Chain Variable Region Amino Acid Sequences

Name	FR1	CDRH1	FR2	CDR2	FR3	CDRH3	FR4	SEQ ID NO
SC27.1	EVQLQESRPELVKPGASVKISCKTSGYTFT	EYTLH	WVKQSHGKSLIEWIG	GINPNNGDTIYNQKFKG	KATLTVDKSSSTAYMELRSLTSEYSAVYYCAR	RAITTVAMDY	WGQGTSTVTVSS	23
SC27.22	QVQLQQPQGAELVRPGASVKLSCKASGYTFT	SYMNN	WVKQRPQGQGLEWIA	MIHPDSEIRLNQKFKD	KATLTVDRSSSTAYMQLSSPTSEDSAVYYCAR	IDSYVGYLFYFDY	WGQGTTLTVSS	27
SC27.103	EVHLQQSGPELVKPGGSMKISCKASGSYFT	GYTMN	WVKQSHGKNLEWIG	LFNPYNGGTSYNQKFKG	KATLTVDKSSSTAYMELLSLTSEDSAVYYCAR	CYRYDGLDY	WGQGTTLTVSS	31
SC27.104	EVQLQQSGPELVKPGASVKISCKTSGYTFT	EYTVH	WVKQSHGKSLIEWIG	GVYPKNGDITYNQKFRG	KATLTVDKSSNTAYMELRSLTSEDSAVYYCTG	KDGYDGFAY	WGQGTTLTVSA	35
SC27.105	EVQLQQSGPELVKPGASVKISCKASGSYFT	GYVMN	WVKQSPKESLIEWIG	EINPSTGSTTYNQKFKA	KATLTVDKSSSTAYMQLKSLTSEDSAVYYCAR	RDYVYVSGFYAMDY	WGQGTSTVTVSS	39
SC27.106	EVQLQQSGPELVKPGASVKISCKTSGYTFT	EYTMH	WVKQSHGKSLIEWIG	GINPNNGGTNYNQKFKG	KATLTVDKSSSTAYMELRSLTSEDSAVYYCAR	RLITYVAMDY	WGQGTSTVTVSS	43
SC27.108	QVQMQQSGAELVRPGTSVKVSKASGYAFT	NYLIE	WVKQRPQGQGLEWIG	LINPQSGGTNYNEKFKG	KATLTADKSSSTAYMQLSSLTSDSDSAVYFCAR	RSPLGSWITYYAYDGVAV	WGQGTTLTVSA	47
SC27.201	EVQLQQSGPELVKPGASVKISCKTSGYTFT	ENIRH	WVKQSRGKSLIEWIG	TIINPNNGETRYNQKFKG	KATLTVDKSSSTAYMELRSLTSEDSAVYYCTR	GITKSPYGM DY	WGQGTSTVTVSS	51
SC27.203	EVQLQQSGPELVKPGASVKISCKTSGYTFT	ENIIH	WVKQSHGKSLIEWIG	GINPINGGTSYNQKFKG	KATLTVDKSSSTAYMELRSLTSEDSAVYYCAR	GITTSPLYAMDY	WGQGTSTVTVSS	55
SC27.204	EVKVLESGGGLVQPGGSLKLSCAASGDFDS	RYHMS	WVRQAPGKGLEWIG	EINPDSSTINYPISLKA	KFIISRDNAKNTLYLQMSKVRSEDTALYYCTG	PAY	WGQGTTLTVSA	59

FIG. 3B

Anti-CLDN Humanized Antibody Heavy Chain Variable Region Amino Acid Sequences

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
hSC27.1	QVQLVQSGAEVKKPGASVKVSKASGYTFT	EYTLH	WVRQAPGQRLWMG	GINPNNGDTIYNQKFKG	RVTITRDTSASTAYMELSSLRSEDNAVYCAR	RAITVYAMDY	WGQGTLLVTVSS	63
hSC27.22	QVQLVQSGAEVKKPGASVKVSKASGYTFT	SYWMN	WVRQAPGQRLWMG	MIHPDSEIRLNQKFKD	RVTITRDTSASTAYMELSSLRSEDNAVYCAR	IDSYYGYLFYFDY	WGQGTLLVTVSS	67
hSC27.108	QVQLVQSGAEVKKPGASVKVSKASGYTFT	NVLIIE	WVRQAPGQGLEMMG	LINPGSGGTMYNEKFKG	RVTMTTDTSTSTAYMELSLRSDNAVYCAR	RSPLGSIWYYAYDGVAY	WGQGTLLVTVSS	71
hSC27.204	EVQLLESGGGLVQPGGSLRLSCAASGFTFS	RYWMS	WVRQAPGKGLEWVS	EINPDSSTINYPSTLKA	RFTISRDNKNTLYLQMNSLRAEDTAVYCTG	PAY	WGQGTLLVTVSS	75
hSC27.22-VH1-8	QVQLVQSGAEVKKPGASVKVSKASGYTFT	SYWMN	WVRQATGQGLEMMG	MIHPDSEIRLNQKFKD	RVTMTNRNTSISTAYMELSSLRSEDNAVYCAR	IDSYYGYLFYFDY	WGQGTLLVTVSS	79
hSC27.22-VH1-46	QVQLVQSGAEVKKPGASVKVSKASGYTFT	SYWMN	WVRQAPGQGLEMMG	MIHPDSEIRLNQKFKD	RVTMTRDTSTSTAYMELSSLRSEDNAVYCAR	IDSYYGYLFYFDY	WGQGTLLVTVSS	81
hSC27.22-VH1-69	QVQLVQSGAEVKKPGSSVKVSKASGGTFS	SYWMN	WVRQAPGQGLEMMG	MIHPDSEIRLNQKFKD	RVTITADESTSTAYMELSSLRSEDNAVYCAR	IDSYYGYLFYFDY	WGQGTLLVTVSS	83
hSC27.204v1	EVQLLESGGGLVQPGGSLRLSCAASGFTFS	RYWMS	WVRQAPGKGLEWVS	EINPDSSTIKYTPSTLKA	RFTISRDNKNTLYLQMNSLRAEDTAVYCTG	PAY	WGQGTLLVTVSS	85
hSC27.204v2	EVQLLESGGGLVQPGGSLRLSCAASGFTFS	RYWMS	WVRQAPGKGLEWVS	EINPDSSTIQYTPSTLKA	RFTISRDNKNTLYLQMNSLRAEDTAVYCTG	PAY	WGQGTLLVTVSS	87
hSC27.204v3	EVQLLESGGGLVQPGGSLRLSCAASGFTFS	RYWMS	WVRQAPGKGLEWVS	EINPDSSTINYNPSTLKA	RFTISRDNKNTLYLQMNSLRAEDTAVYCTG	PAY	WGQGTLLVTVSS	89
hSC27.204v4	EVQLLESGGGLVQPGGSLRLSCAASGFTFS	RYWMS	WVRQAPGKGLEWVS	EINPDSSTINYPSTLKA	RFTISRDNKNTLYLQMNSLRAEDTAVYCTG	PAY	WGQGTLLVTVSS	91

FIG. 3B Cont.

Anti-CLDN Humanized Antibody Heavy Chain Variable Region Amino Acid Sequences

Name	FR1	CDRH1	FR2	CDRH2	FR3	CDRH3	FR4	SEQ ID NO
hSC27.204v5	EVQLLESGGGLVQPGGSLRLSCAASGFD	RYMMS	WVRQAPGKGLEWVS	EINPDSSTIKYTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	93
hSC27.204v6	EVQLLESGGGLVQPGGSLRLSCAASGFD	RYMMS	WVRQAPGKGLEWVS	EINPDSSTIKYTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	95
hSC27.204v7	EVQLLESGGGLVQPGGSLRLSCAASGFD	RYMMS	WVRQAPGKGLEWVS	EINPDSSTINYNPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	97
hSC27.204v8	EVQLLESGGGLVQPGGSLRLSCAASGFTF	RYMMS	WVRQAPGKGLEWVS	EINPDSSTINYNTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	99
hSC27.204v9	EVQLLESGGGLVQPGGSLRLSCAASGFTF	RYMMS	WVRQAPGKGLEWVS	EINPDSSTIKYTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	101
hSC27.204v10	EVQLLESGGGLVQPGGSLRLSCAASGFTF	RYMMS	WVRQAPGKGLEWVS	EINPDSSTIKYTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	103
hSC27.204v11	EVQLLESGGGLVQPGGSLRLSCAASGFTF	RYMMS	WVRQAPGKGLEWVS	EINPDSSTINYNPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	105
hSC27.204v12	EVQLLESGGGLVQPGGSLRLSCAASGFD	RYMMS	WVRQAPGKGLEWVS	EINPDSSTINYNTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	107
hSC27.204v13	EVQLLESGGGLVQPGGSLRLSCAASGFD	RYMMS	WVRQAPGKGLEWVS	EINPDSSTIKYTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	109
hSC27.204v14	EVQLLESGGGLVQPGGSLRLSCAASGFD	RYMMS	WVRQAPGKGLEWVS	EINPDSSTIKYTPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	111
hSC27.204v15	EVQLLESGGGLVQPGGSLRLSCAASGFD	RYMMS	WVRQAPGKGLEWVS	EINPDSSTINYNPSLKA	RFTISRDN SKNTLYLQMNSLRAEDTAVVYCTG	PAY	WGQGTLLVTVSS	113

FIG. 3B Cont.

Anti-CLDN Murine Antibody Variable Region Nucleic Acid Sequences

Name	Chain	Nucleic Acid Sequence	SEQ ID NO
SC27.1	Light Chain	GACATCCAGATGACACAATCTTCATCCTCTCTCTGATCTCTAGGAGACAGAGTCACCATTAATTCGTTAGCCTGGTATATACAGCAGAAACCCAGGAAA TGCTCCAGGCTCTTAATATCTGGTGCAACCACTTTGAAACTGGGACTCTTCAAGATTTCAGTGGCAGTGGATCTGGAAGGATTACACTCTCAGTATTACCACTCTTCGGAGCTGAAGATGCTG CTACTTATTACTGTCAACAATAATTGGAGTACTCCACTCAGGTTTCGGTACTGGGACCAAGCTGGAGCTGAAA	20
SC27.1	Heavy Chain	GAGGTCAGCTGCAAGAGTCTAGACCTGAGCTGGTGAAGCCTGGGGCTTCAGTGAAGATATCTGCAAGACTTCTGGATACACATTCACTGAATACACCTTGGCTGGGTGAAGCAGAGTCATGG AAAGAGCCTTGAGTGGATTGGAGGTATTAAATCCTAACAATGGTGATATCTACAACCAGAAATTCAGAGGCAAGGCCACATTGACTGTAGACAAGTCTCCAGCACAGCTACATGGAGCTCC GCAGCCTGACATCTGAAATATTTCTGCAGTCTATTACTGTGCAAGAAGGGCGATTACGGTCTATGCTATGGAAGTACTGGGGTCAAGGTACCTCAGTCAACCGTCTCCTCA	22
SC27.22	Light Chain	GACATTGTGCTGACACAGTCTCCTGCTTCTTAGCTGTATCTCTGGGGCAGAGGGCCACCATCTCAATGCAAGGCCAGCCAGACTGTCACTACATCTAGCTATAGTTATATGCACTGGTTCCAAACA GAAACCAGGACAGCCACCACCAACTCCTCATCAAGTTTGCATCCAACGTAGAAATCTGGGGTCCCTGTCAGATTTCAGTGGCAGTGGGTCTGGGACAGACTTCACCTCAACATCCATCTCTGTGGAGG AGGAGGATATTTCAACATATTTACTGTGACACAGTTGGGAGATTCCGGTGGAGGCCAACCAAGCTGGAAATCAAA	24
SC27.22	Heavy Chain	CAGGTCCAACTGCAGCAGCCTGGGGCTGAGCTGGTGAGGCTTGAGCTTCAGTGAAGCTGTCTGCAAGGCTTCTGGCTACACCTTTCACAGCTACTGGATGAAGTGGGTGAAGCAGAGGCCCTGG ACAAGGCTTTGAATGGATTGCCATGATTCATCTTCGATAGTGAATTAAGTTAAATCAGAAATTCAAGGCAAGGCCACATTGACTGTAGACAGATCTCCAGCACAGCTTACATGCAACTCA GCAGCCGACATCTGAGGACTCTGCGGTCTATTACTGTGCAAGAAATTGATAGTTATATGTTTACCTGTTTACTTTGACTACTGGGGCCAAGGCCACCCTCTCACAGTCTCTCTCA	26
SC27.103	Light Chain	CAAAATGTTCTCACCCAGTCTCCAGCAATCATGTCTGCAATCTCTAGGGGAACGGGTCAACATGACCTGCAGCTGCCAGCTCAAGTGTAAAGTTCCAGTTACTTGCAGTGGTACCAGAGAAGCCAGG ATCTCTCCCCACACTCTGGATTATAGGACATCCGACCTGGCTTCTGGAGTCCAGCTCGCTTCAGTGGCAGTGGATCTGGGACCTCTTACTCTCTCACAATCAGCAGCATGGAGGCTGAAGATG CTGCCACTTATTACTGCCACCAAGTATCATCTGTTCCCGTGGAGCTTCGGTGGAGGCCACCAAGCTGGAAATCAAA	28
SC27.103	Heavy Chain	GAGGTCACCTGCAACAGTCTGGACCTGAGCTAGTGAAGCCTGGAGGTTCAATGAAGATATCTTGAAGGCTTCTGGTTACTTCACTTCACTGGCTACACCAATGAAGTGGGTGAAGCAGAGCCATGG AAAGAACCTTTGAGTGGATTGGACTTTTAAATCTTACAAATGGTGGTACTAGTTAATACAGAAAGTTCAAGGGCAAGGCCACATTAACTGTAGACAAGTCAATCCAGCACAGCTTACATGGAGCTCC TCAGTCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATGCTATAGGTACGAGGTCTTGACTACTGGGGCCAAGGCCACCCTCTCACAGTCTCTCTCA	30

FIG. 3C

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FIG. 3C Cont.

Anti-CLDN Murine Antibody Variable Region Nucleic Acid Sequences

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PCT/US2015/059106

Name	Chain	Nucleic Acid Sequence	SEQ ID NO
SC27.108	Light Chain	GAAATTGTGCTACCCAGTCTCAGCACATCATGGTGTCATCTCCAGGGGAGAAGGTACCATCACCTGCACTGTCAGTGTGAGTAAAGTTCCAGCAACTTGCACCTGGTACCTGGAAGTGCAGGAAAGTCAAGTAACTCCCAAACTCTGGATTATGGCACATCCAACCTGGCTCTGGAGTCCCTGTTGGCTTCACTGGCAGTGGATCTGGGACCTCTTATCTCTCACAAATCAGCAACATGGAGGCTGAAGATGCTGCCACTTATTACTGTCAACAGTGGAGTAGTTACCCACACAGTTCCGAGGGGGGACCAAGCTGGAAATAAAA	44
SC27.108	Heavy Chain	CAGGTCCAAATGCAGCAGTCTGGAGCTGAGCTGGTGAAGGCTGGGACTTCAGTGAAGGTGTCCTGCAAGGCTTCTGGATACGCCCTTCACTAATTACTTTAGAGTGGGTAAAGCAGAGGCCTGGACAGGGCCTTGAGTGGATTGGACTGATTAACTCTGGAAGTGGTGGTACTAATTACAATGAGAAGTTCAAGGGCAAGGCAACACTGACTGCAGACAAATCCTCCACCACCTGCTACATGCAAGCTCAACAGCCTGACATCTGCTGCGGTTTATTTCTGTGCAAGACGGTCCCTCTAGGGAGTTGGATCTACTATGCTTACGACGGTGTGCTTACTGGGGCCCAAGGGACTCTGGTCACTGCTCTGCA	46
SC27.201	Light Chain	GACATCCAGATGACACAATCTTCATCTCCTCTTCTGTCTCTCTGGAGACAGAGTCATATTACTTGCAGGCAAGTGAGGACATCTATTAATCGGTTAGCTGGTATCAACAGAAACCCAGGAAATGCTCTTAGGCTCTTAATATCTGGTGCAACCACTTTGGAAGCTGGGGTTCCTTCAGGATTCACTGGCAGTGGATCTGGAAGGATTACACTCTCAGCATTACCACTTTCAGACTGAAGATGTTGCTACTTATTACTGTCAACAGTATTGGAGTACTCTCTCGAGCTTCGGTGGAGGCACCAAGCTGGAACTCAAG	48
SC27.201	Heavy Chain	GAGGTCAGCTGCAACAGTCTGGAGCTGAACTGGTGGAAGCCTGGGGCTTCAGTGAAGATATCTTCGAAAGACTTCTGGATACACACTTCACTGAAACATCAGACACTGGGTGAAGCAGAGCCGAGGAAAGAGCCTTGAGTGGATTGGTACTATTAACTCTTAATAATGGTGAGACTAGGTACAATCAGAAGTTCAAGGGCAAGGCCACATTTGACTGTAGACAAGTCTCCAGCACAGCCTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCGCAAGTCTATTACTGTACAAGGGGATTAACAAGTCCCCCTTATGGTATGGACTACTGGGTCAAGGAACTCAATCAACCCGCTCTCCTCA	50
SC27.203	Light Chain	GACATCCAGATGACACAATCTTCATCTCCTCTTCTGTATCTCTAGGAGACAGAGTCACCATCACTTGCAGGCAAGTGAGGACATATATAATCGGTTAGCCTGGTATCAGCAGAATCCAGGAAATACTCTTAGGCTCTTAATGTCTGGTGCAACCACTTTGGAAGCTGGGGTTCCTTCAAGATTCACTGGCAGTGGATCTGGAAGGATTACACTCTCAGCATTACCACTTTCAGATTGAAGATGTTTCTACTTATTACTGTCAACAATAATTGGAGTACTCTCTCGAGCTTCGGTGGAGGCACCAAGCTGGAAATCAAA	52
SC27.203	Heavy Chain	GAGGTCAGCTGCAACAGTCTGGAGCTGAGCTGGTGGAAGCCTGGGGCTTCAGTGAAGATATCTTCGAAAGACTTCTGGATACACACTTCACTGAAACATCATACACTGGGTGAAGCAGAGCCATGGAAAGAGCCTTGAGTGGATTGGAGGTATTAACTCTATCAATGGTGGTACTAGCTACAACCAAGATTTCAAGGGCAAGGCCACATTTGACTGTAGACAAGTCTCCAGCACAGCCTACATGGAGCTCCGTAGCCTGACATCTGAGGATTCGCAAGTCTATTACTGTGCAAGGGGATTTACTAGTCCCCCTTATGCTATGGACTACTGGGTCAAGGAACTCAGTCAACCCGCTCTCCTCA	54
SC27.204	Light Chain	GACATTGTGATGACCCAGTCTCAAAAATTCATGTCACATCAGTAGGAGACAGGGTCAGCGTCGCCCTGCAAGGCCGTCAGAATGTGGGTACTAGTGTAGCCTGGTATCAACAGAAACCCAGGACATTTCTCTAAATCACTGATTTACTCGGCATCTACCGGTACAGTGGAGTCCCTAATCGCTTACAGGCAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGGAAGACTTGGCAGACTATTCTGTGAGCAATATATCACCTATCCGTACAGTTTCGGAGGGGGACCAAGCTGGAAATAA	56
SC27.204	Heavy Chain	GAGGTGAAGGTTCTCGAGTCTGGAGTGGCCTGGTGAGCCTGGAGGATCCCTGGAACCTCTCCTGTGCAAGCCTCAGGATTCGATTTTGTAGTACTAGTGGGTGGGTCCGGCAGGCTCCAGGAAAGGCCTAGAATGGATTGGAGAAATTAATCCAGATAGCAGTACGATAAATATACGCCATCTCTAAAGGCTAAATTCATCATCTCCAGAGACAAGCCCAAAAATACGCTGTACCTGCAAAATGAGCAAAAGTGAGATCTGAGGACACAGCCCTTTATTACTGTACAGGACCAGCTTACTGGGGCCAAAGGAGCTCTGGTCACTGTCTCTGCA	58

FIG. 3C Cont.

Anti-CLDN Humanized Antibody Variable Region Nucleic Acid Sequences

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PCT/US2015/059106

Name	Chain	Nucleic Acid Sequence	SEQ ID NO
hSC27.1	Light Chain	GACATCCAGATGACCCAGTCTCCATCTTCGGTGTCTGCATCTGTAGGAGACAGAGTCAACCATCACCTTTGAAAGCGAGTGAGGATATTTACAACCCGGTTAGCCTGGTATCAGCAGAAACCA GGGAAAGCCCTTAAGTCTATGGTGCAACAGTTTGAAAGCTGGGGTCCCATCAAGGTTCAAGCGCAGTGGATCTGGGACAGATTACACTCTCACCATCAGCAGCCTGCAGCCT GAAGATTTTGCAACTTACTATTGTCAACAGTATTGGAGTACTTCACTCACGTTTCGGTCAAGGGACCAAGCTGGAGATTAAA	60
hSC27.1	Heavy Chain	CAGGTCCAGCTTGTGCAGTCTGGGGCTGAGGTGAAGAAAGCCTGGGGCCTCAGTGAAGGTTTCTCTGCAAGGCTTCGGATACACCTTCACTGAGTATACTCTGCAATTGGGTGGCCAGGGCC CCGGACAAGGCTTGGTGGATGGGAGGATCAACCCTAACAATGGTGACAAATATATAACAGAGTTCAAGGGCAGAGTCAACATTACAGGGACACATCCGCGAGCACAGCCTAC ATGGAGCTGAGCAGCCTGAGATCTGAAGACACGCGCTGTGATTACTGTGCGAGAAGGCGGATTACGGTCTATGCTATGGACTACTTGGGGTCAAGGTACCCCTAGTCACCGTCTCGAGC	62
hSC27.22	Light Chain	GACATTGTGATGACCCAGTCCCTTGACAGTTTGGCCGTTAGCTTGGGGAGCGTGCACCATCAACTGTAGGGCTAGTCAAACTGTTTCTACATCTCTACTCTTACATGCAATTGGTAT CAGCAGAAACCTGGTCAGCTCCAAACTGCTGATTTATTTTCGCACTTAACGTCGAGTCCGGAGTTCCTGACCCGTTTCAAGGCGGTACAGATTTTACACTTACCATCTCA TCTCTGAAGCAGAAAGATGTGGCCGTGTACTATTGTGAGCATTCCTGGAGATTCCTGGACCTTCGGGAGGGAACCAAGCTCGAGATTAAA	64
hSC27.22	Heavy Chain	CAGGTGCAGTTGGTGCAGAGCGGCGCGAAGTCAAGAAACCCAGGAGCTTCTGTCAAAGTCTCCTGTAAGGCTCCGGATATACCTTCAACAGCTACTGGATGAATTTGGGTAAAGACAGGCC CCGGACAGAGGCTTGGTGGATGGGAATGATCATCCCTCTGACAGCGAGATTGGCTCAACAGAGTTTAAAGACCGAGTGACTATCACACGCGATACCACTGCTAGCACAGCCTAC ATGGAGTTGAGTTCTCTTCGTAGCGAGGACACTGCCGTGTTATTGCGCCGCGACTCATATATATGGTTTACTGTCTTCTGACTATTGGGGCCAGGGGACCAACCGTGACTGTGTG TCTTCC	66
hSC27.108	Light Chain	GAAATCGTCTTACACAATCCCTGACACTCTGAGCCTTCTCCAGGCGAGCGAGCAACCTTTCCTCTCAATCAGTTCAGCAATTTTGCACTGGTACCAGCAGAAAG CCTGGTCAGGCACCCGATTTGATCTATGGCACATCTAACCTGGCCAGCGGCATCCCTGCTCGGTTTCACTGAGTCTGGCTCCGGAACAGATTTTCACTCTCACTATCAGCTCCCTTTGAG CCTGAAGATTTTGGCGTGACTACTGTGCAAGCAATGGAGTTCTTACCCCAACACTTTGGGGCGGGACAAGGTCGAGATAAAA	68
hSC27.108	Heavy Chain	CAGGTACAGCTGGTCCAGTCCGGCGCTGAGGTTAAGAAAGCCCGTGCCTCGTGAAGGTATCTTGAAGGCTCAAGGTTTACACCTTACAAATTTATCTGATCGAATGGGTGAGACAGGCC CCAGGTCAGGGTCTGGAATGGATGGGACTCATCAACCCCTGGGAGTGGCGGACCAACTACAACGAAAGTTTAAAGGGAGAGTGACAATGACCACAGATACCACTACCTCCACCGCATAT ATGGAGCTGCGAAGCTTGAGGTCGATGACACTGCTGTGACTATTGCGCCCGTGAAGCCCACTCGGGTCTTGGATCTATTACGATACGATGGGTGGGCTATTGGGGCCAGGGCACC CTGGTGACAGTCAGCTCC	70
hSC27.204	Light Chain	GACATCCAGATGACCCAGTCCCTTCAGCCTGTCTGCTTCGGTGGGCGACAGAGTGACATCACATGCAAGGCGGGCCAGAACGTTGGGCACCTCTGTGGCTGGTCCAGCAGAAAGCCT GGCAAGGCCCTCAAGTCCCTGATCTACTCGGCTCTACAGATACTCCGGGTGCCCTCCAGATTCTCCGGCTTGGCTTGGCACCAGCTTTACCCCTGACCATCAGCTCCCTGCAGCCCC GAGGACTTCGCCACCTACTACTGCCAGCAGTACATCACCTACCCCTACACTTCGGCGGAGGCCACCAAGGTGGAATCAAG	72
hSC27.204	Heavy Chain	GAAAGTCAGCTGCTGGAATCTGGCGGCGGAGTGGTGAGCCTGGCGGATCTCTGAGACTGTCTTGTGCGCCTCCGGCTTCACTTCTCCGGTACTGGATGTCTGGGTGGCAGCAGGCT CCTGGCAAGGGCTGGAATGGGTGTCGAGATCAACCCCGACTCTCCACCATCAACTACACCCCGACTTGAAGGCCCGGTTCAACATCTCTCGGGACAACCTCAAGAAACACCCCTGTAC CTGCAGATGAATCCCTGCGGGCCGAGGACACCGCCGTGTACTACTGTACTCGGGCCCTGCTTATTGGGGCCAGGGGACCCCTCGTGACCGGTGTCTCTCT	74

FIG. 3C Cont.

Anti-CLDN Humanized Antibody Variable Region Nucleic Acid Sequences

WO 2016/073649

PCT/US2015/059106

Name	Chain	Nucleic Acid Sequence	SEQ ID NO
hSC27.108v1	Light Chain	GAAATCGTGCTGACTCAGTCTCCGATTTCCAGTCCGTACACCCAGGAGAAAGTCACCATCACCTTGTCTCTCAAGCATCTCTTCTAGTAACCTGCACCTGGTATCAGCAGAAG CCTGATCAGTCCCTAAGCTTTGGATATACGGCACCTCAAACTCGCTCCGGAGTTCTTCAAGGTTTTCAGGTAGTGGATCTGGAACCGATTTTACCCCTTACAATAAACAGTCTTGAG GCCGAGGAGCCCGCCACTTACTACTGCCAGCAGTGGAGTTCTTACCCCCACACATTTGGGGGCGGCACCAAAGTGGAGATCAAA	76
hSC27.22-VH1-8	Heavy Chain	CAGGTGCAGCTGGTGAGTCTGGCGCCGAAAGTGAAGAAACCTGGCGCTCCGTGAAGGTGTCTGTCAAGGCCCTCCGGCTACACCTTTTACCAGCTACTGGATGAACCTGGGTGCGACAGGCT ACCGGCCAGGGCTTGAATGGATGGGCATGATCACCCCTCCGACTCCGAGATCCGGCTGAACCCAGAAATTCAGGACAGAGTGACCATGACCCGGAACACCTCCATCTCCACCGCTAC ATGGAACCTGTCTCTCCCTGCGGAGCGAGACACCGCGTGTACTACTGCGCCCGGATCGACTCTCTACTACGGCTACCTGTTCTACTTTCGACTACTGGGGCCAGGGCCACACCGTGACCGTG TCATCT	78
hSC27.22-VH1-46	Heavy Chain	CAGGTGCAGCTGGTGAGTCTGGCGCCGAAAGTGAAGAAACCTGGCGCTCCGTGAAGGTGTCTGTCAAGGCCCTCCGGCTACACCTTTTACCAGCTACTGGATGAACCTGGGTGCGACAGGCC CCTGGACAGGGCTTGAATGGATGGGCATGATCACCCCTCCGACTCCGAGATCCGGCTGAACCCAGAAATTCAGGACCGCGTGACCATGACCCAGAGACACCTCCACAGCACCGTGTAC ATGGAACCTGTCTCTCCCTGCGGAGCGAGACACCGCGTGTACTACTGCGCCCGGATCGACTCTCTACTACGGCTACCTGTTCTACTTTCGACTACTGGGGCCAGGGCCACACCGTGACCGTG TCATCT	80
hSC27.22-VH1-69	Heavy Chain	CAGGTGCAGCTGGTGAGTCTGGCGCCGAAAGTGAAGAAACCTGGCGCTCCGTGAAGGTGTCTGTCAAGGCCCTCCGGCCGACCTTCCAGCTACTGGATGAACCTGGGTGCGACAGGCC CCTGGACAGGGCTTGAATGGATGGGCATGATCACCCCTCCGACTCCGAGATCCGGCTGAACCCAGAAATTCAGGACAGAGTGACCATCACCGCCGAGTGACCTCCACCTCCACCGCTAC ATGGAACCTGTCTCTCCCTGCGGAGCGAGACACCGCGTGTACTACTGCGCCCGGATCGACTCTCTACTACGGCTACCTGTTCTACTTTCGACTACTGGGGCCAGGGCCACACCGTGACCGTG TCATCT	82
hSC27.204v1	Heavy Chain	GAAGTGCAGCTGCTGGAATCTGGCGCCGAGTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGTGCGCCTCCGGCTTACCCTTCTCCCGGTACTGGATGTCTCTGGGTGCGACAGGCT CCTGGCAAGGGCTTGAATGGGTGTCCGAGATCAACCCCGACTCTCTCACCATCAAGTACACCCCGCTGAAAGGCCCGGTTTACCATCTCTCGGGACAACTTCCAAGAAACACCCCTGTAC CTGCAGATGAACCTCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTTATTGGGGCCAGGGCCACCTCTCGTGACCGGTGCTCTCT	84
hSC27.204v2	Heavy Chain	GAAGTGCAGCTGCTGGAATCTGGCGCCGAGTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGTGCGCCTCCGGCTTACCCTTCTCCCGGTACTGGATGTCTCTGGGTGCGACAGGCT CCTGGCAAGGGCTTGAATGGGTGTCCGAGATCAACCCCGACTCTCTCACCATCAAGTACACCCCGCTGAAAGGCCCGGTTTACCATCTCTCGGGACAACTTCCAAGAAACACCCCTGTAC CTGCAGATGAACCTCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTTATTGGGGCCAGGGCCACCTCTCGTGACCGGTGCTCTCT	86
hSC27.204v3	Heavy Chain	GAAGTGCAGCTGCTGGAATCTGGCGCCGAGTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGTGCGCCTCCGGCTTACCCTTCTCCCGGTACTGGATGTCTCTGGGTGCGACAGGCT CCTGGCAAGGGCTTGAATGGGTGTCCGAGATCAACCCCGACTCTCTCACCATCAAGTACACCCCGCTGAAAGGCCCGGTTTACCATCTCTCGGGACAACTTCCAAGAAACACCCCTGTAC CTGCAGATGAACCTCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTTATTGGGGCCAGGGCCACCTCTCGTGACCGGTGCTCTCT	88

FIG. 3C Cont.

Anti-CLDN Humanized Antibody Variable Region Nucleic Acid Sequences

Name	Chain	Nucleic Acid Sequence	SEQ ID NO
hSC27.204v4	Heavy Chain	GAAAGTGCAGCTGCTGGAATCTGGCGGCGGACTGGTGCAGCCTGGCGGATCTCTGAGACTGCTTGTTGCGGCTCCGGCTTCGACTTCTCCCGGTACTGGATGTCCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAATGGGTGTCCGAGATCAACCCCGACTCTCCACCATCAAGTACACCCCGAGCTTGAAGGCCCGGTTTCAACCATCTCTCGGGACAACCTCCAAGAACACACCTCTGTACCTGTCAGATGAACTCCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTATTGGGGCCAGGGCACCCCTCGTGAACGCTGTCCTCT	90
hSC27.204v5	Heavy Chain	GAAAGTGCAGCTGCTGGAATCTGGCGGCGGACTGGTGCAGCCTGGCGGATCTCTGAGACTGCTTGTTGCGGCTCCGGCTTCGACTTCTCCCGGTACTGGATGTCCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAATGGGTGTCCGAGATCAACCCCGACTCTCCACCATCAAGTACACCCCGAGCTTGAAGGCCCGGTTTCAACCATCTCTCGGGACAACCTCCAAGAACACACCTCTGTACCTGTCAGATGAACTCCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTATTGGGGCCAGGGCACCCCTCGTGAACGCTGTCCTCT	92
hSC27.204v6	Heavy Chain	GAAAGTGCAGCTGCTGGAATCTGGCGGCGGACTGGTGCAGCCTGGCGGATCTCTGAGACTGCTTGTTGCGGCTCCGGCTTCGACTTCTCCCGGTACTGGATGTCCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAATGGGTGTCCGAGATCAACCCCGACTCTCCACCATCAAGTACACCCCGAGCTTGAAGGCCCGGTTTCAACCATCTCTCGGGACAACCTCCAAGAACACACCTCTGTACCTGTCAGATGAACTCCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTATTGGGGCCAGGGCACCCCTCGTGAACGCTGTCCTCT	94
hSC27.204v7	Heavy Chain	GAAAGTGCAGCTGCTGGAATCTGGCGGCGGACTGGTGCAGCCTGGCGGATCTCTGAGACTGCTTGTTGCGGCTCCGGCTTCGACTTCTCCCGGTACTGGATGTCCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAATGGGTGTCCGAGATCAACCCCGACTCTCCACCATCAAGTACACCCCGAGCTTGAAGGCCCGGTTTCAACCATCTCTCGGGACAACCTCCAAGAACACACCTCTGTACCTGTCAGATGAACTCCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTATTGGGGCCAGGGCACCCCTCGTGAACGCTGTCCTCT	96
hSC27.204v8	Heavy Chain	GAAAGTGCAGCTGCTGGAATCTGGCGGCGGACTGGTGCAGCCTGGCGGATCTCTGAGACTGCTTGTTGCGGCTCCGGCTTCGACTTCTCCCGGTACTGGATGTCCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAATGGGTGTCCGAGATCAACCCCGACTCTCCACCATCAAGTACACCCCGAGCTTGAAGGCCCGGTTTCAACCATCTCTCGGGACAACCTCCAAGAACACACCTCTGTACCTGTCAGATGAACTCCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTATTGGGGCCAGGGCACCCCTCGTGAACGCTGTCCTCT	98
hSC27.204v9	Heavy Chain	GAAAGTGCAGCTGCTGGAATCTGGCGGCGGACTGGTGCAGCCTGGCGGATCTCTGAGACTGCTTGTTGCGGCTCCGGCTTCGACTTCTCCCGGTACTGGATGTCCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAATGGGTGTCCGAGATCAACCCCGACTCTCCACCATCAAGTACACCCCGAGCTTGAAGGCCCGGTTTCAACCATCTCTCGGGACAACCTCCAAGAACACACCTCTGTACCTGTCAGATGAACTCCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTATTGGGGCCAGGGCACCCCTCGTGAACGCTGTCCTCT	100
hSC27.204v10	Heavy Chain	GAAAGTGCAGCTGCTGGAATCTGGCGGCGGACTGGTGCAGCCTGGCGGATCTCTGAGACTGCTTGTTGCGGCTCCGGCTTCGACTTCTCCCGGTACTGGATGTCCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAATGGGTGTCCGAGATCAACCCCGACTCTCCACCATCAAGTACACCCCGAGCTTGAAGGCCCGGTTTCAACCATCTCTCGGGACAACCTCCAAGAACACACCTCTGTACCTGTCAGATGAACTCCCTGCGGGCCGAGGACACCGCGTGTACTACTGTACCGGCCCTGCTTATTGGGGCCAGGGCACCCCTCGTGAACGCTGTCCTCT	102

FIG. 3C Cont.

Anti-CLDN Humanized Antibody Variable Region Nucleic Acid Sequences

Name	Chain	Nucleic Acid Sequence	SEQ ID NO
hSC27.204v11	Heavy Chain	GAAAGTCAGCTGCTGGAATCTGGCGGCGGACTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGCCGCTCCGGCTTACCTTCTCCCGGTACTGGATGTCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAAATGGGTGTCCGAGATCAACCCCGACTCCTCCACCATCAAACTACAAACCCAGCTGAAGGCCCGGTTACCATCTCTCGGGACAACCTCCAAGAACAACACCCCTGTACCTGCAGATGAACCTCCCTGCGGGCCGAGGACACCGCGGTGACTGTGCGGGCCCTGTTATTGGGGCCAGGGCACCCCTCGTGACCGGTGCTCTCT	104
hSC27.204v12	Heavy Chain	GAAAGTCAGCTGCTGGAATCTGGCGGCGGACTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGCCGCTCCGGCTTACCTTCTCCCGGTACTGGATGTCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAAATGGGTGTCCGAGATCAACCCCGACTCCTCCACCATCAAACTACAAACCCAGCTGAAGGCCCGGTTACCATCTCTCGGGACAACCTCCAAGAACAACACCCCTGTACCTGCAGATGAACCTCCCTGCGGGCCGAGGACACCGCGGTGACTGTGCGGGCCCTGTTATTGGGGCCAGGGCACCCCTCGTGACCGGTGCTCTCT	106
hSC27.204v13	Heavy Chain	GAAAGTCAGCTGCTGGAATCTGGCGGCGGACTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGCCGCTCCGGCTTACCTTCTCCCGGTACTGGATGTCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAAATGGGTGTCCGAGATCAACCCCGACTCCTCCACCATCAAACTACAAACCCAGCTGAAGGCCCGGTTACCATCTCTCGGGACAACCTCCAAGAACAACACCCCTGTACCTGCAGATGAACCTCCCTGCGGGCCGAGGACACCGCGGTGACTGTGCGGGCCCTGTTATTGGGGCCAGGGCACCCCTCGTGACCGGTGCTCTCT	108
hSC27.204v14	Heavy Chain	GAAAGTCAGCTGCTGGAATCTGGCGGCGGACTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGCCGCTCCGGCTTACCTTCTCCCGGTACTGGATGTCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAAATGGGTGTCCGAGATCAACCCCGACTCCTCCACCATCAAGTACAAACCCAGCTGAAGGCCCGGTTACCATCTCTCGGGACAACCTCCAAGAACAACACCCCTGTACCTGCAGATGAACCTCCCTGCGGGCCGAGGACACCGCGGTGACTGTGCGGGCCCTGTTATTGGGGCCAGGGCACCCCTCGTGACCGGTGCTCTCT	110
hSC27.204v15	Heavy Chain	GAAAGTCAGCTGCTGGAATCTGGCGGCGGACTGGTGACGCTGGCGGATCTCTGAGACTGTCTTGCCGCTCCGGCTTACCTTCTCCCGGTACTGGATGTCTGGGTGCGACAGGCTCCTGGCAAGGGCCCTGGAAATGGGTGTCCGAGATCAACCCCGACTCCTCCACCATCAAACTACAAACCCAGCTGAAGGCCCGGTTACCATCTCTCGGGACAACCTCCAAGAACAACACCCCTGTACCTGCAGATGAACCTCCCTGCGGGCCGAGGACACCGCGGTGACTGTGCGGGCCCTGTTATTGGGGCCAGGGCACCCCTCGTGACCGGTGCTCTCT	112

FIG. 3C Cont.

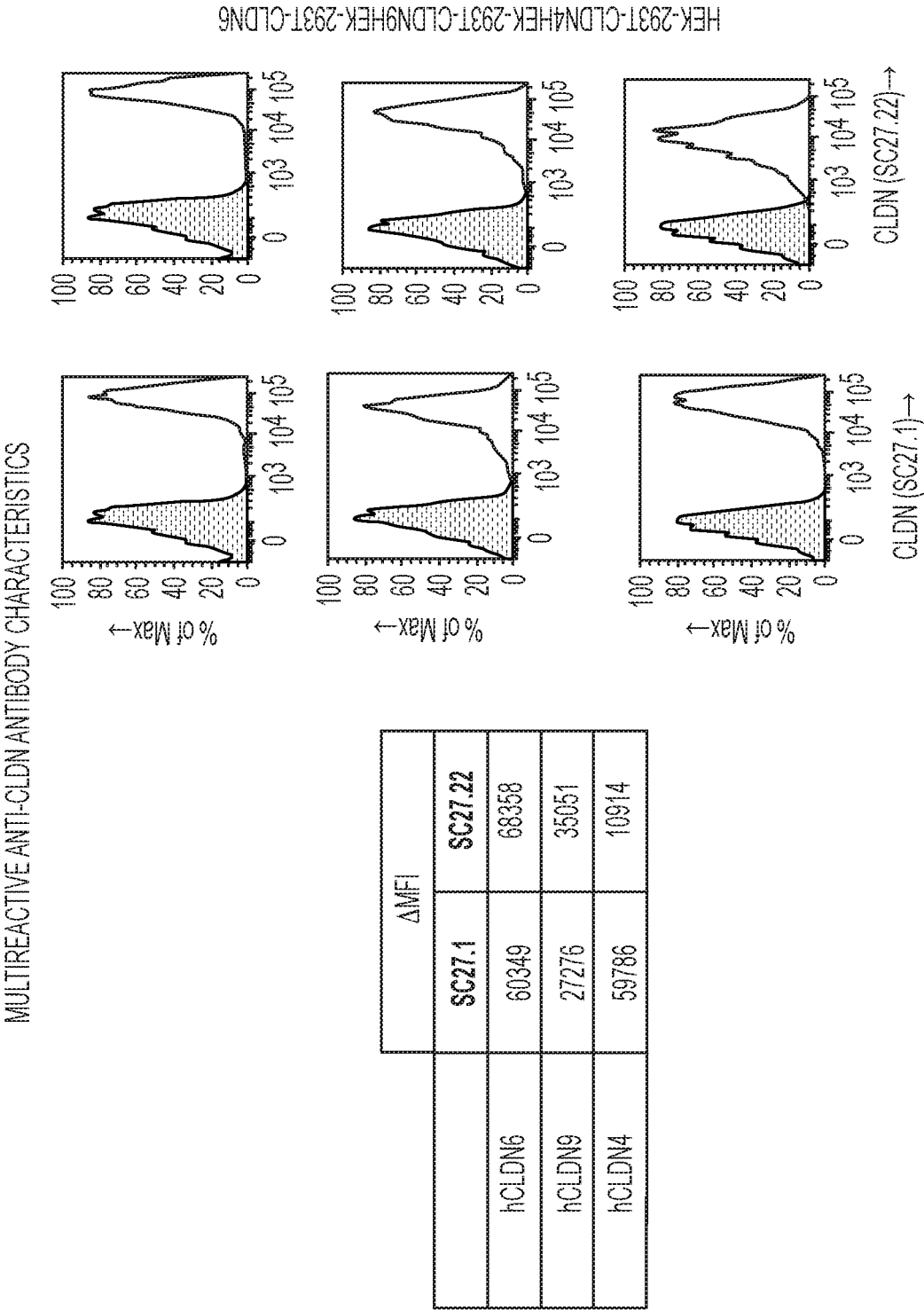


FIG. 4A

**Anti-CLDN Antibodies Bind HEK-293T Cells Over-expressing
hCLDN6, CLDN4 and CLDN9**

Antibody	CLDN6 (MFI)	CLDN4 (MFI)	CLDN9 (MFI)
SC27.102	38709	818	265
SC27.103	99568	75	12118
SC27.104	39175	22618	7227
SC27.105	82961	69	80
SC27.106	55760	1987	595
SC27.108	99745	88	86
SC27.201	29895	23145	7101
SC27.203	47431	2977	587
SC27.204	106271	79	23048
mlgG2b control	84	73	81

FIG. 4B

Anti-CLDN Antibody Characteristics

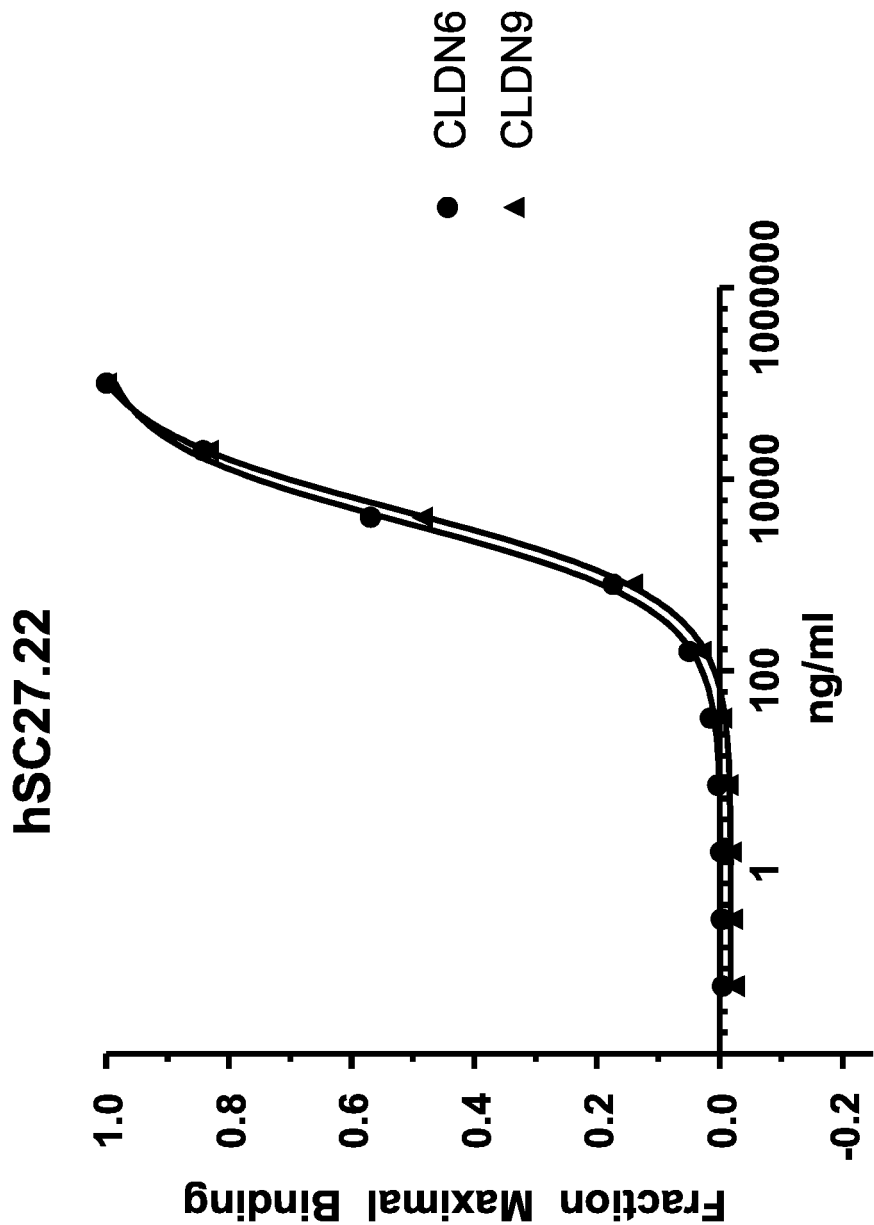


FIG. 4C

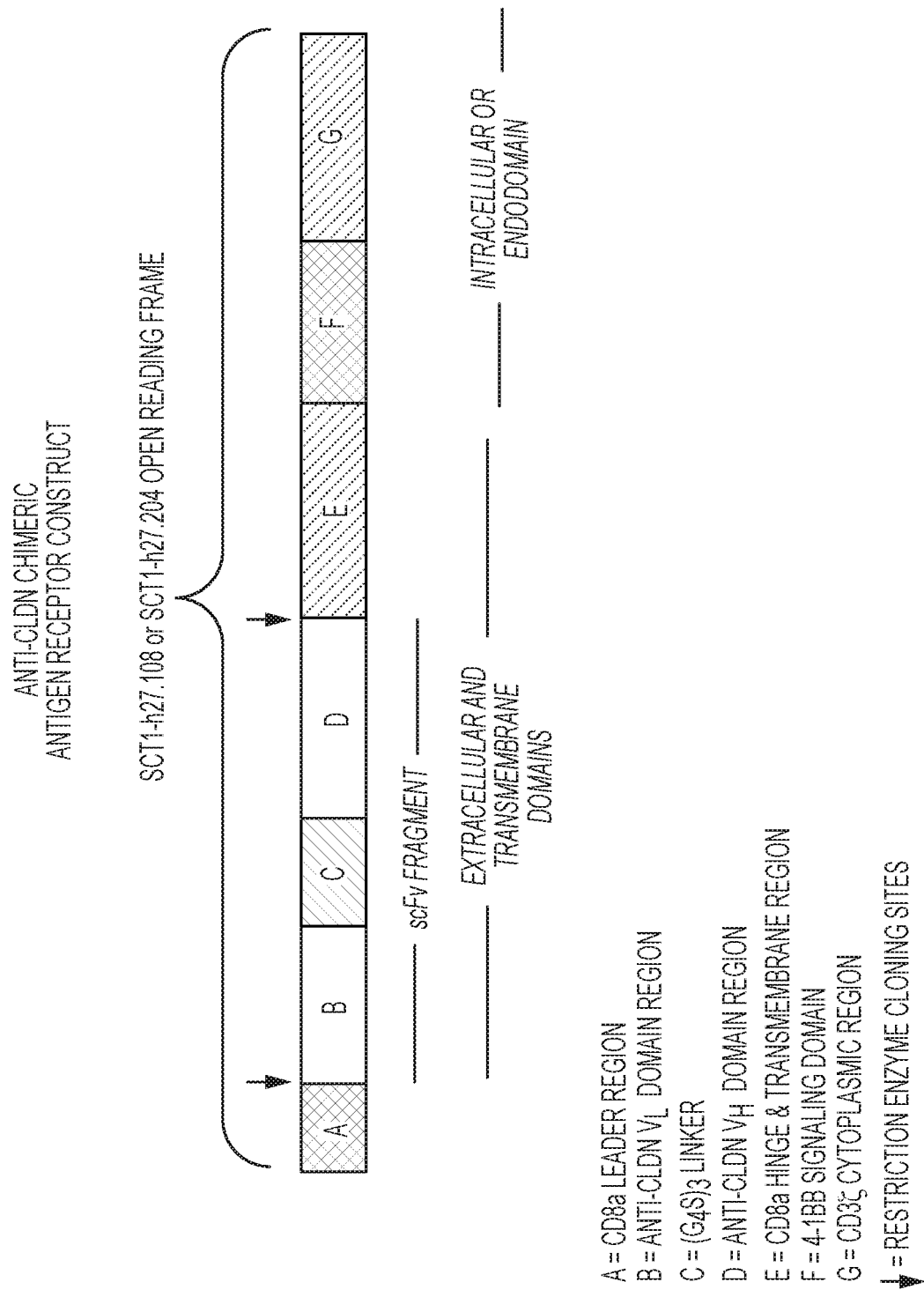


FIG. 5

SCT1-h27.108 Anti-CLDN6 Chimeric Antigen Receptor Nucleotide Sequence

atgcccctgtgacagcccctgtgctctgtgctgtgctgcatgcgcgccccgaaatgtgttacacaatccccctgccactctgagcccttctcc
aggcagcgagcaaaccttctctgcatgttctcttcaatcagttccagcaattgcatgtgaccagcagaagcctgtgacagcaccctgattgtgatctat
ggcacatcaaccctggccagcgcatcccctgctcggttcagtgatctgctccggaaacagatttcactctaciatcagctccctgagcctgaagatttgcctg
gtactactgacgaatggagttctacccccacaccccttggcggggacaagaagtcgagataaaaggcgggagagatctggcgaggcggaagtggc
ggaggggatctcaggtacagctgggtccagtcggcgctgaggttaagaagcccggtgctccctgtaagggtatctgtaaaggcctcaggttacacctttacaa
attatctgatcgaatgggtgagacagggccccaggtcagggctcgtggaatggaatgggacatcaacccctgggagtgcgggaccaactacaacgaaaagtgtt
aaggggagagtgaacaatgacacagataccagtaacctccaccgcataatatgagctgcgaagcttgaggtccgatgacactgctgtgtactattgcgcccgt
agaagcccactcgggtctgtgatttattacgcatacagatggtgtgacctattgggcccagggccacccctggtagagctctcgcacacacacccctgccccca
gacctctacacccgccccctacaattgccagccactgtctctgagggccgaggtctgtagaccagctgtggcgagccgtgcacaccagaggactgg
atttcgctgcgacatctacatctggccccctctggccggcacatgtggctgtctgtcgtgagcctctgtatcacccctgtactgcaagcgggcagaaaagaa
ctgctgtacatctttaagcagcccttcattgcggccccgtgcagaccacccaggaagagcggctgctctcgcagattccccgcaggaagaagagcggctg
cgagctgagagtgaagttcagcagatccgcgcagccccctgcctacaaagcaggccagaaccagctgtacaacagctgaacctgtggcagacgggaag
agtcgacgtgtcggacaagcggagagggccgggtcctgaaatggcggtcaagcccgaggaagaacccccaggaaggcctgtataacgaactgca
gaaagacaagatggccgaggtcctacagcgagatcggaaatgaagggtgagcgagggaagagggccacgattggcctgtaccagggtgacctgagcac
cgccaccaaggacacctatgacgcccctgcacatgagggcccttgccaccctagatga

SEQ ID NO. 8

FIG. 6A

SCT1-h27.108 Anti-CLDN6 Chimeric Antigen Receptor Amino Acid Sequence

MALPVTALLPLALLHAARPEIVLTQSPATLSLSPGERATLSCSVSSSSSNLHWYQQKPGQAPRLLIYGTSNLA
SGIPARFSGSGGTDFLTITISSEPEDFAVYYCQQWSSYPHTFGGKVEIKGGSGGGSGGSGVQLVQ
SGAEVKKPGASVKVSKASGYTFNLYIEWVRQAPGQGLEWMGLINPGSGGTNYNEKFKGRVTMTTDTSTSTA
YMELRSLRSDDTAVYYCARRSPLGSIWYAYDGVAYWGQGLTVTSSTTTAPRPPPTAPTIASQPLSLRPEACR
PAAGGAVHTRGLDFACDIYWAPLAGTCGVLLSLVITLYCKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEE
EEGGCELRVKFSRSADAPAYKQGQNQLYNELNLRREEYDVLDRRGRDPEMGKPRRKNPQEGLYNELQKD
KMAEAYSEIGMKGERRRRGKGGHDGLYQGLSTATKDTYDALHMQALPPR

SEQ ID NO. 9

FIG. 6B

SCT1-h27.204v2 Anti-CLDN6 Chimeric Antigen Receptor Nucleotide Sequence

atgcccctgtgacagccctgtctgtcctctggctctgtctgtcgtcgcgcccgacatccagatgacccagtcacccctccagccctgtctgtccgtg
ggcgacagagtgaacctacacatgcaaggccggccagaaacgtggccacctctgtggccctgtggtccagcagaagccctggcaaggcccccaagtccttgatctactc
cgccctctacagatactccggcgtgcccctccagattctccggctctgtgacccgaccttacccctgaccatcagctccctgcagccccgaggacttcgccacctta
ctactgccagcagtcacatcaccttacccttccggtggaggcaccacaaaggagggaatcaaggcgcgaggagatctgcgaggcggaagtggcgag
gggatatgaagtgcagctgtggaatctggcggaactgtgagcctgtgagactgtctgtgcccgtcccggttacccttcccggtactctggat
gtccctgggtgcagaggctcctgtgcaaggccctggaaatgggtgtccgagatcaaccccgacctccaccatccagtacaccccgagccctgaaggccccggttca
ccatctctcgggacaaatccaagaacacccctgtaccctgcagatgaactccctgcgggcgaggacacccgctgtactactgtaccggccccctgtatttggggcca
ggcacccctgtgaccgtgtccttctctcgcaccacaacccctgtccccagaccctctacacccgccccataatggccagccctgtctgtcgtgagggcccgag
gctgtagaccagctgtgtggtggagccgtgcacaccagaggagctgattcgcctgcgacatctacatctgtggccccctgtgcccgcacatgtggcgtgtgtctgtct
gagcctcgtgatcacccctgtactgcaagcggggcagaagaactgctgtacatcttaagcagcccttcagcgccccgtgcagaccacccaggaagaggaag
gctgtctcctgcagattccccgagggaagaagaaggcgtgcgagctgagagtgaagtacagcagatccgcgcgacgccccctgtccctacagcagggccagaacc
agctgtacaacgagctgaacctgggcagacgggaagagtagcagcgtgtgtggacaaagcggagggccgtatcctgaaatgggcggaagccccagacgga
agaacccccagggaaggcctgtataacgaacigcagaaagacaagaatggccgaggccctacagcgagatcggaatgaaggcgagcggaagagaggaag
ggccacgattggcctgtaccaggggctgtgagcacccgcccaccaaaggacacctatgacgccccctgcacatgcaggccccctgcccacctagatga

SEQ ID NO. 10

FIG. 6C

SCT1-h27.204v2 Anti-CLDN6 Chimeric Antigen Receptor Amino Acid Sequence

MALPVTALLPLALLHAARPDIQMTQSPSSLASVGDRTVTITCKAGQNVGTSVAWFQQPGKAPKSLIYSASYR
YSGVPSRFSGSGTDFTLTISLQPEDFATYYCQQYITYPYTFGGGTKVEIKGGGGGGGGGGSEVQLLE
SGGLVQPGGSLRLSCAASGFTFSRYWMSWVRQAPGKGLEWVSEINPDSSTIQYTPSLKARFTISRDN SKNTLY
LQMNSLRAEDTAVYYCTGPAYWGQGLTVTVSSSSTTPAPRPPTPAPTIASQPLSLRPEACRPAAGGAVHTRGLD
FACDIYWAPLAGTCGVLLSLVITLYCKRGRKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEEGGCELRVKFSR
SADAPAYKQGQNQLYNELNLRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEIGMKG
ERRRGKGDGLYQGLSTATKDTYDALHMQALPPR

SEQ ID NO. 11

FIG. 6D

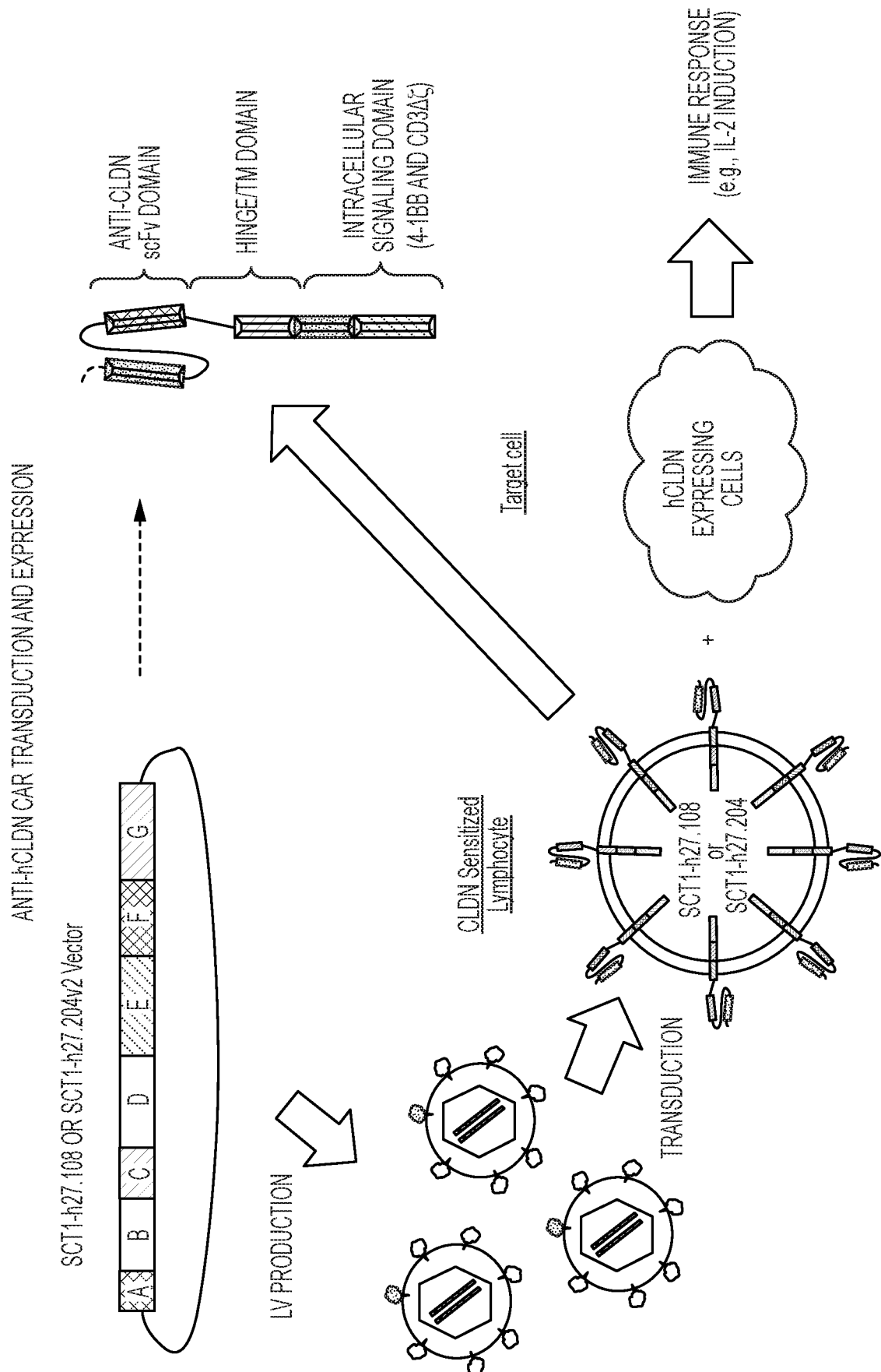
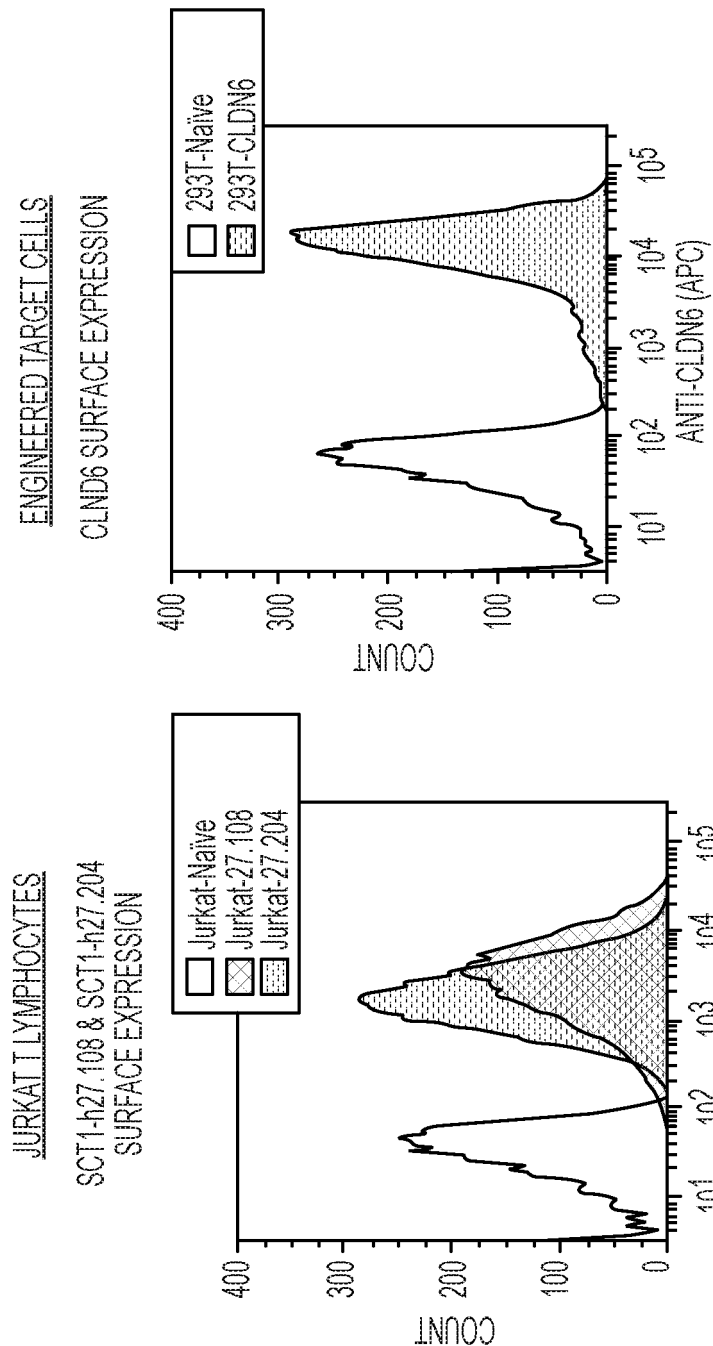


FIG. 7

ANTI-CLDN6 CAR IS EXPRESSED ON JURKAT CELLS
FOLLOWING TRANSDUCTION



SCT1-h27.108 & SCT1-h27.204 Anti-CLDN CAR Jurkat
Cells Produce IL-2 Upon Contact with hCLDN6

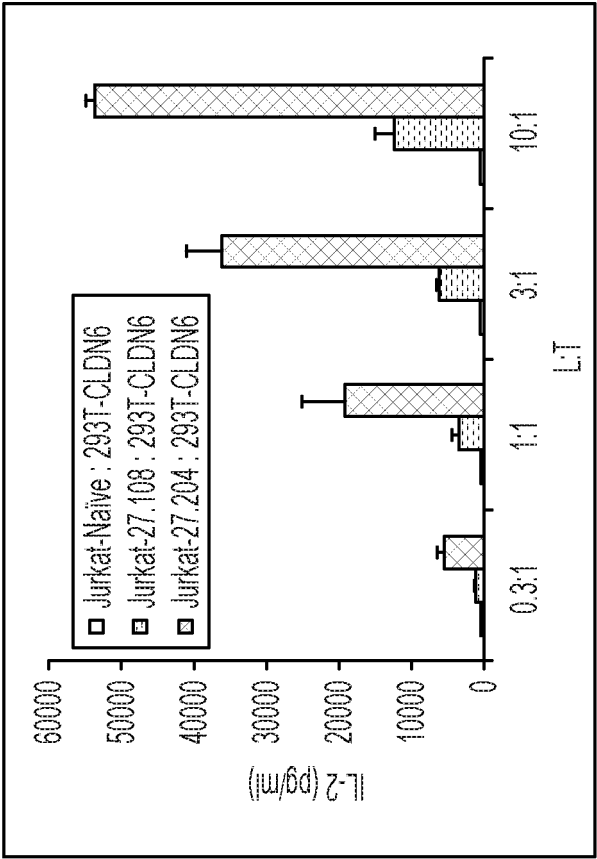


FIG. 9B

	Lymphocytes (L)			Target (T)
Condition (L:T)	Jurkat-Naïve	Jurkat-27.108	Jurkat-27.204	293T-CLDN6
10:1	0.3e6 cells	0.3e6 cells	0.3e6 cells	0.03e6 cells
3:1	0.09e6 cells	0.09e6 cells	0.09e6 cells	0.03e6 cells
1:1	0.03e6 cells	0.03e6 cells	0.03e6 cells	0.03e6 cells
0.3:1	0.009e6 cells	0.009e6 cells	0.009e6 cells	0.03e6 cells

FIG. 9A

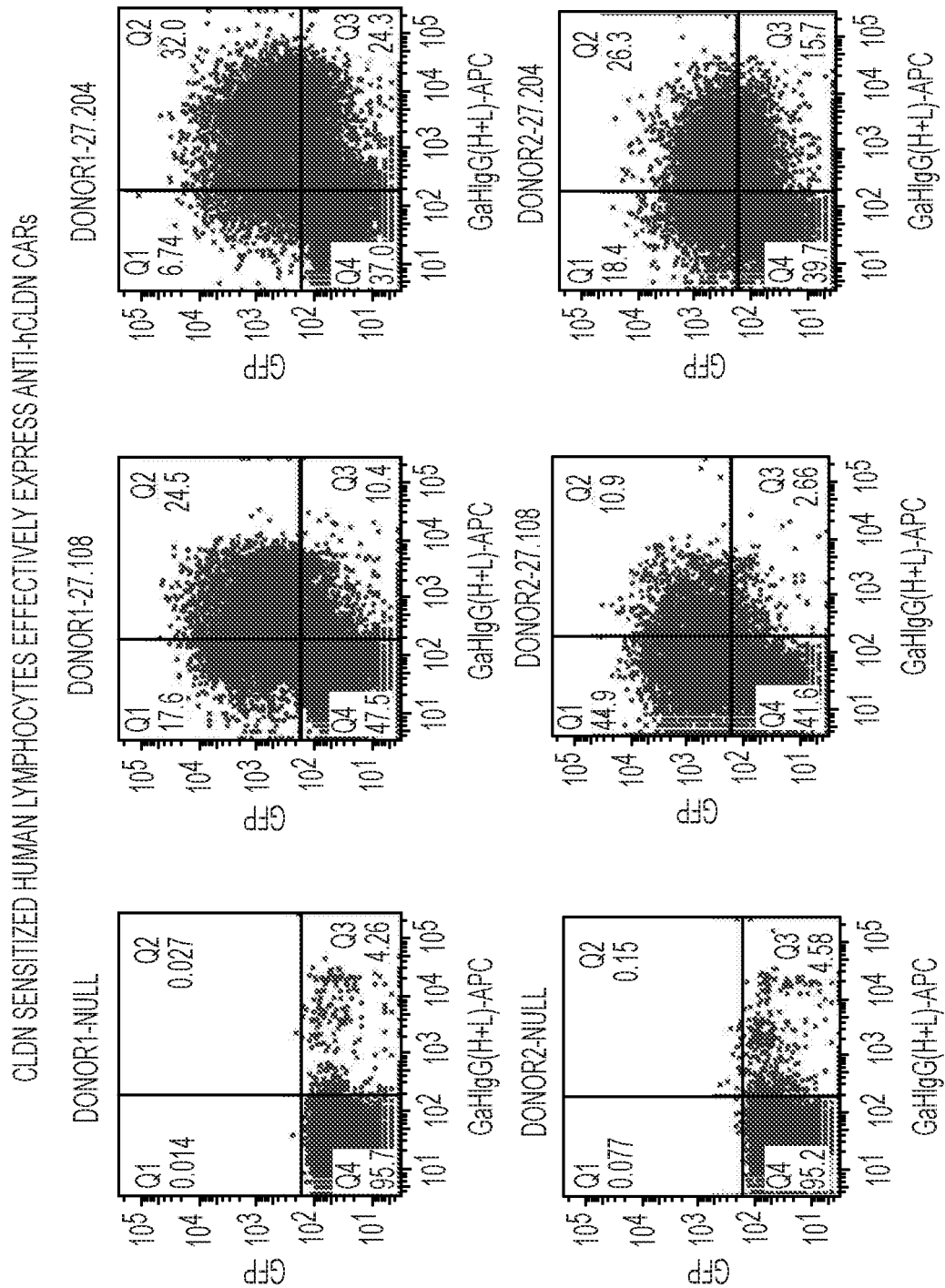


FIG. 10

TARGET CELL CLDN SURFACE EXPRESSION PROFILES

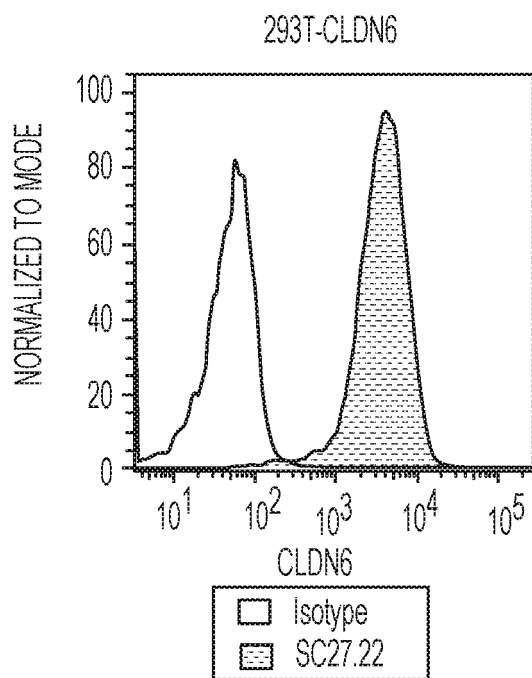


FIG. 11A

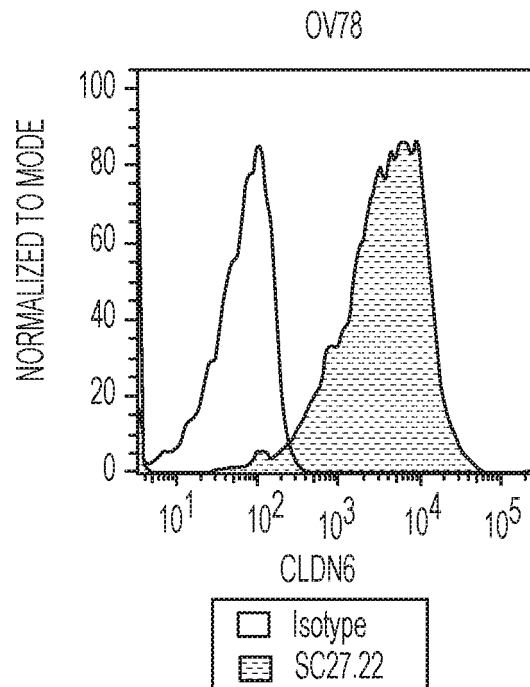


FIG. 11B

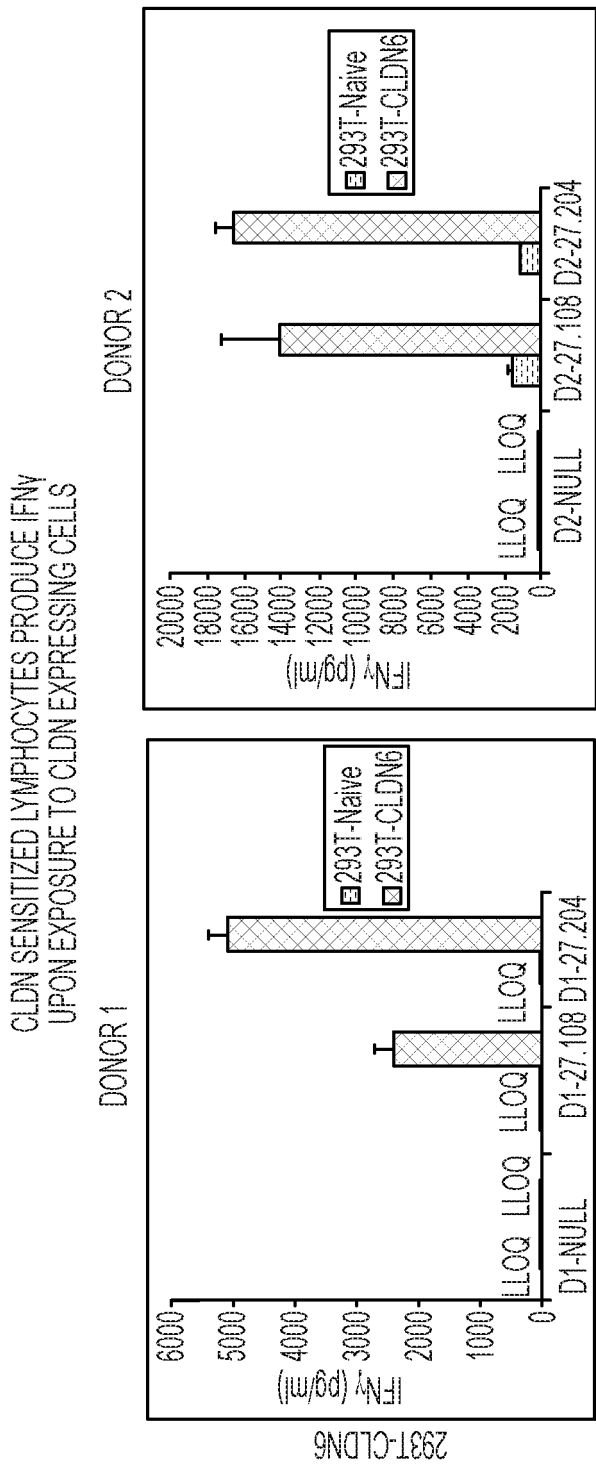


FIG. 12A

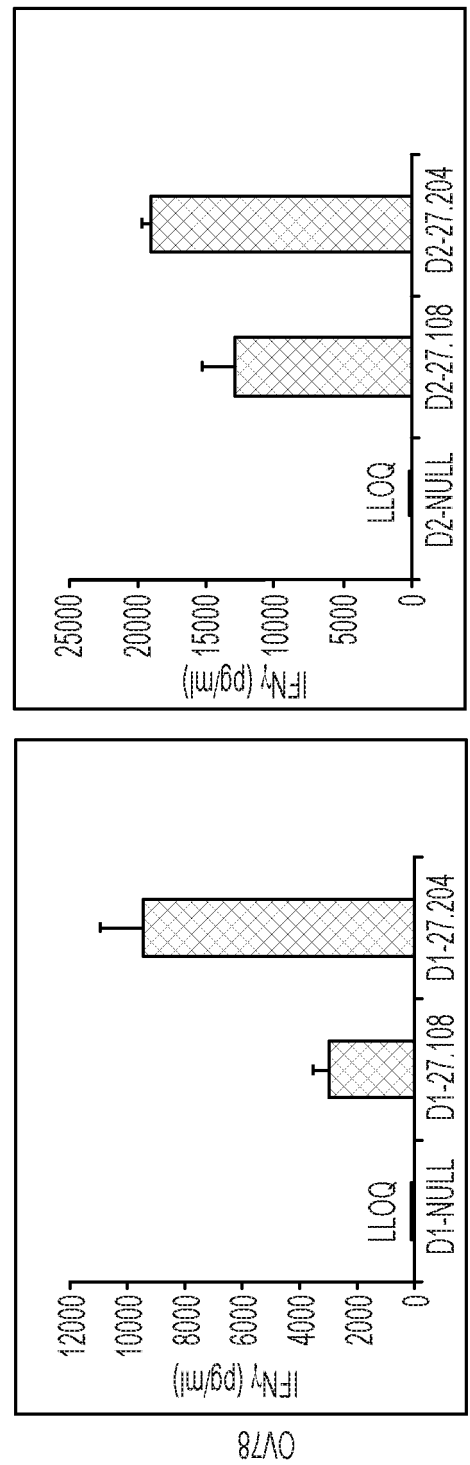


FIG. 12B

CLDN SENSITIZED LYMPHOCYTES PRODUCE TNF α UPON EXPOSURE TO CLDN EXPRESSING CELLS

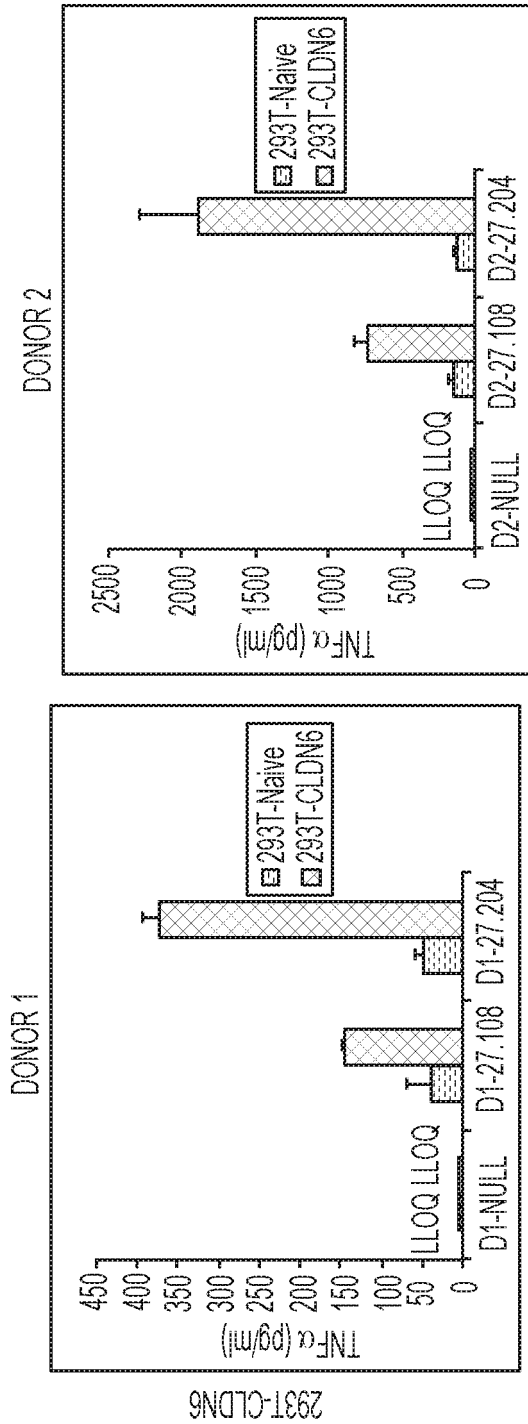


FIG. 13A

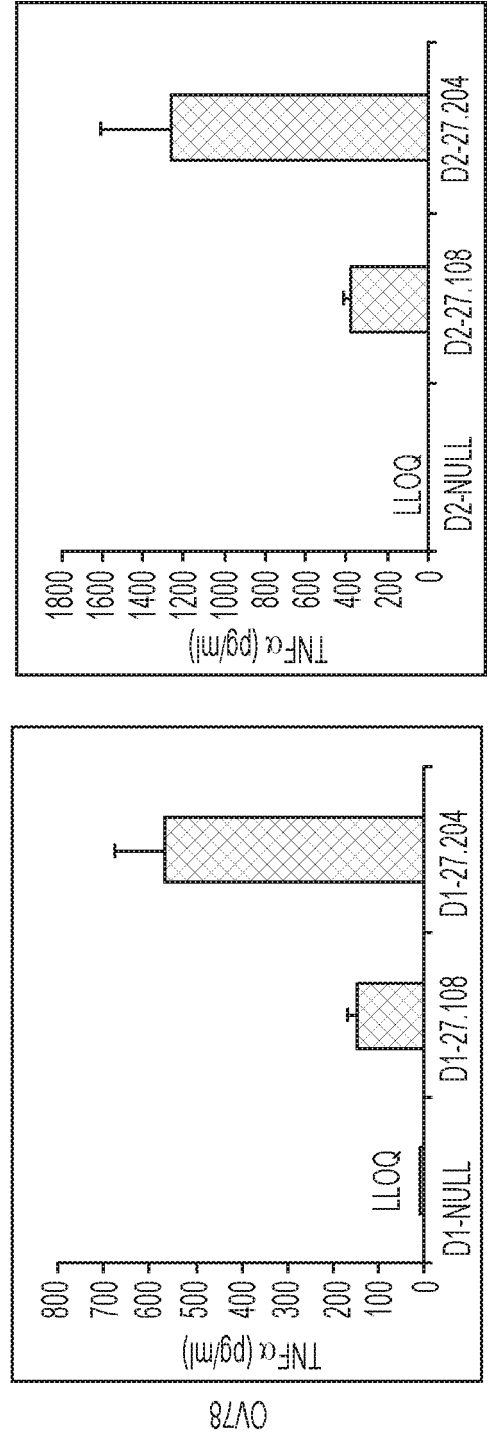


FIG. 13B

CLDN SENSITIZED LYMPHOCYTES ELIMINATE CLDN EXPRESSING CELLS UPON EXPOSURE

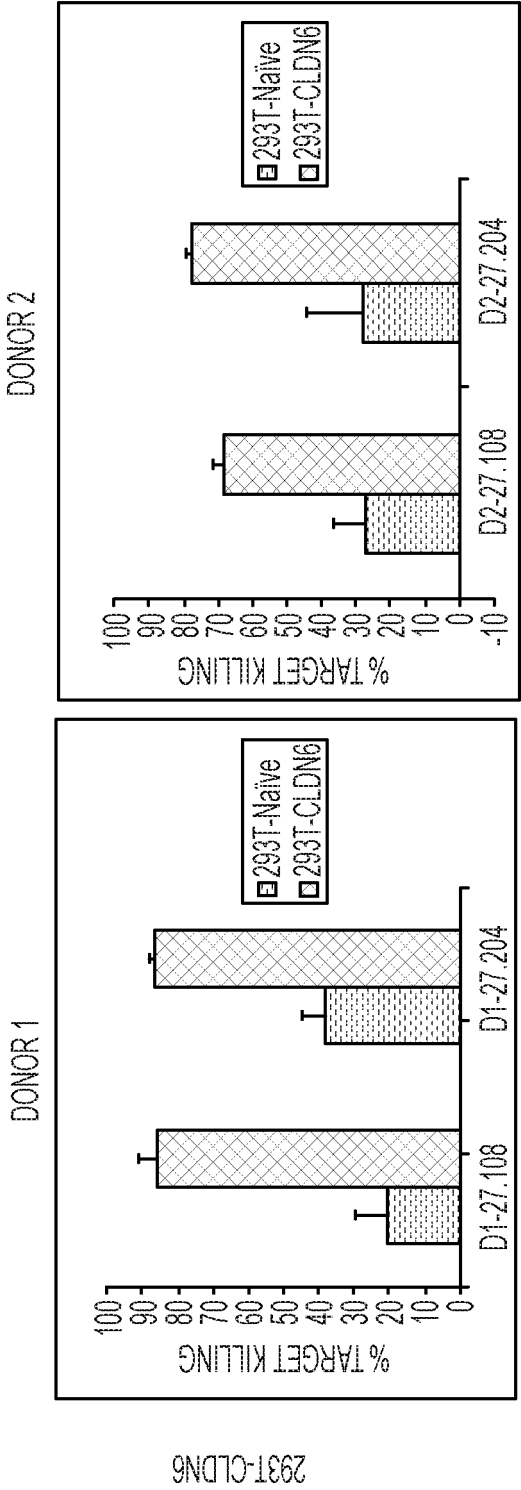


FIG. 14A

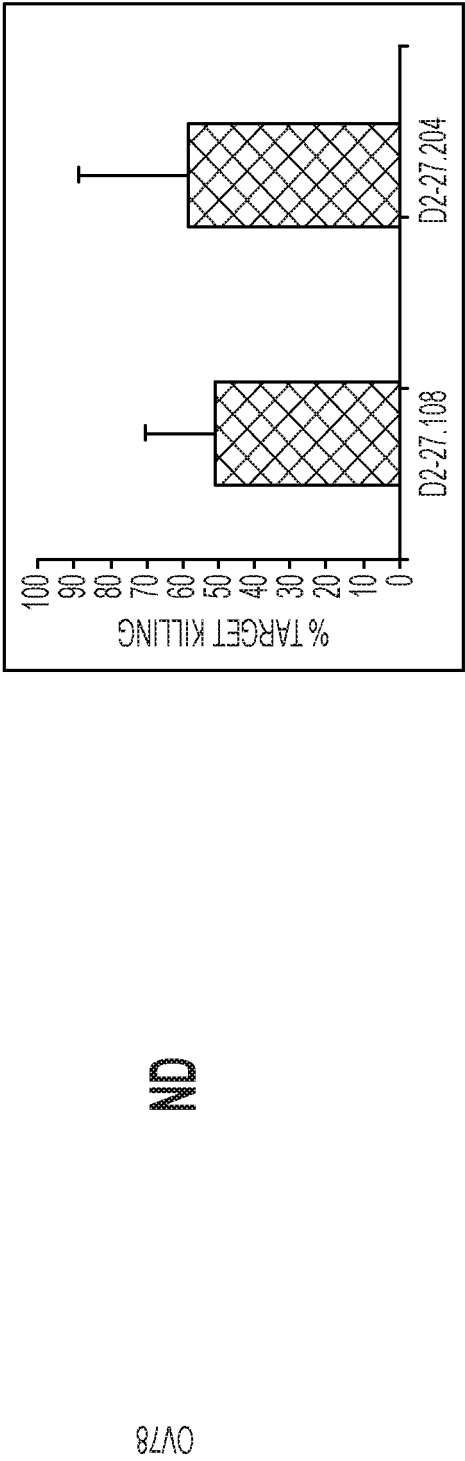


FIG. 14B