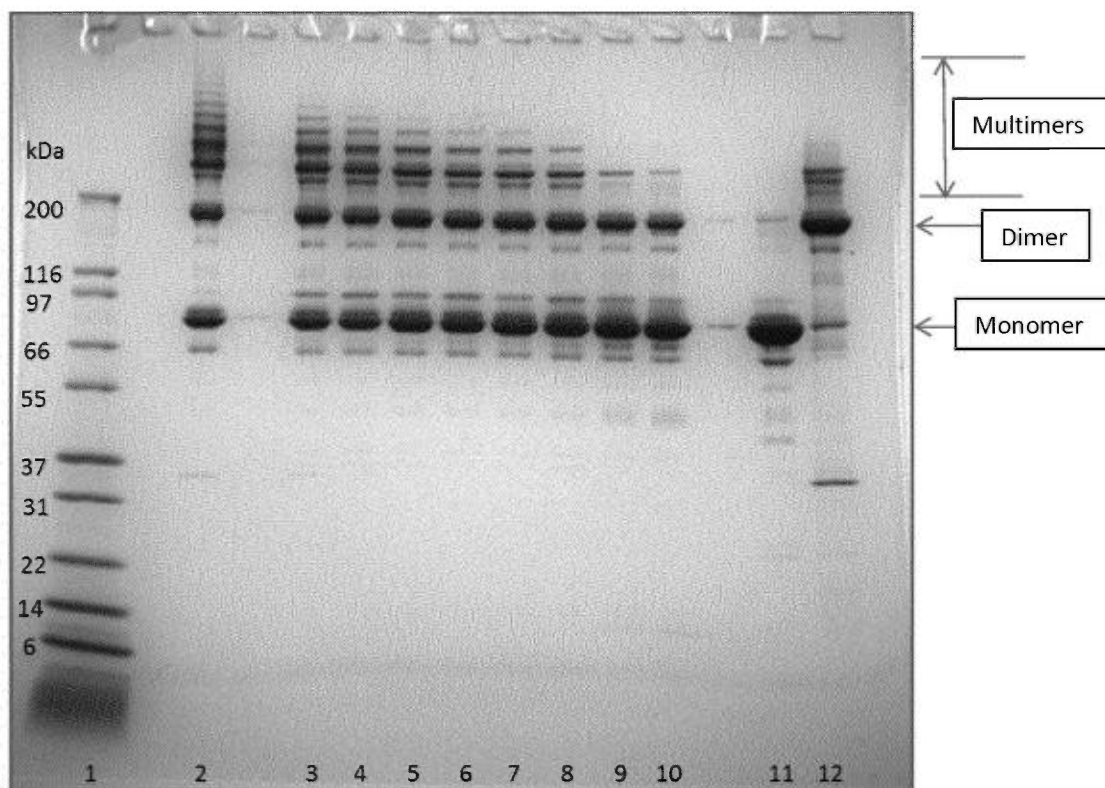
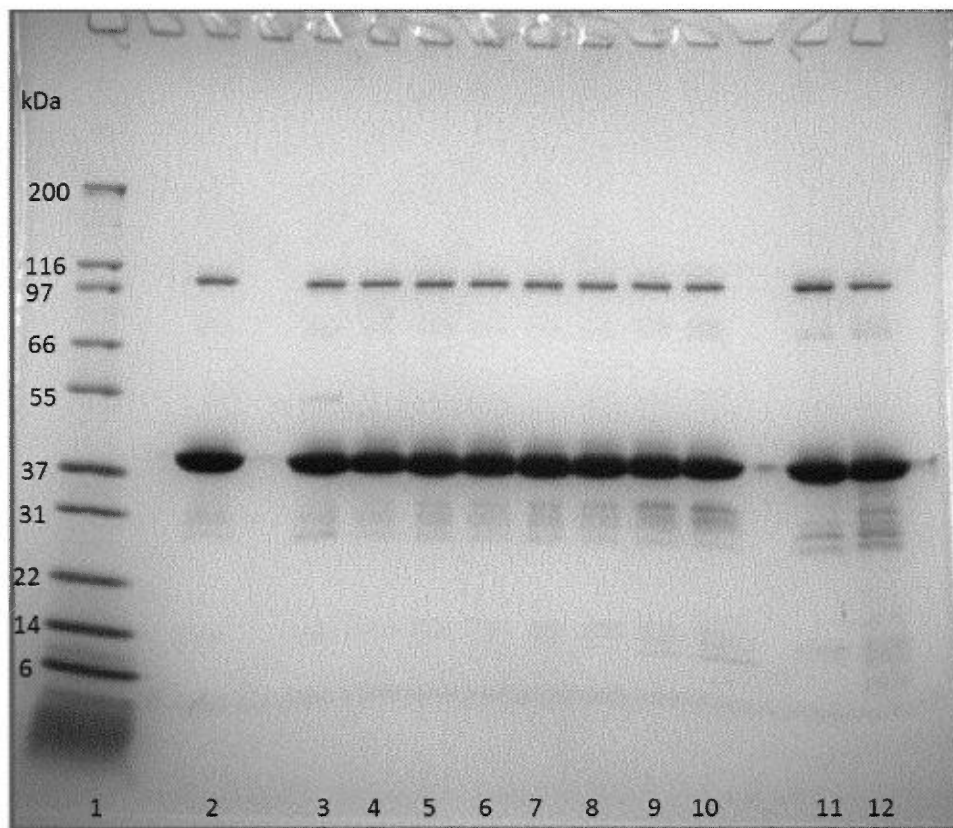


1/29

Figure 1

Lane	Sample
1	Novex Mark 12 Molecular Weight Markers
2	A26Fab-645dsFv Post Protein-A Purification
3	A26Fab-645dsFv Conversion @ Time 00:30
4	A26Fab-645dsFv Conversion @ Time 01:00
5	A26Fab-645dsFv Conversion @ Time 02:00
6	A26Fab-645dsFv Conversion @ Time 03:00
7	A26Fab-645dsFv Conversion @ Time 04:00
8	A26Fab-645dsFv Conversion @ Time 05:00
9	A26Fab-645dsFv Conversion @ Time 20:20
10	A26Fab-645dsFv Conversion @ Time 44:14
11	A26Fab-645dsFv Monomer Reference Material
12	A26Fab-645dsFv Multimer Reference Material

2/29

Figure 2

Lane	Sample
1	Novex Mark 12 Molecular Weight Markers
2	A26Fab-645dsFv Post Protein-A Purification
3	A26Fab-645dsFv Conversion @ Time 00:30
4	A26Fab-645dsFv Conversion @ Time 01:00
5	A26Fab-645dsFv Conversion @ Time 02:00
6	A26Fab-645dsFv Conversion @ Time 03:00
7	A26Fab-645dsFv Conversion @ Time 04:00
8	A26Fab-645dsFv Conversion @ Time 05:00
9	A26Fab-645dsFv Conversion @ Time 20:20
10	A26Fab-645dsFv Conversion @ Time 44:14
11	A26Fab-645dsFv Monomer Reference Material
12	A26Fab-645dsFv Multimer Reference Material

3/29

Figure 3

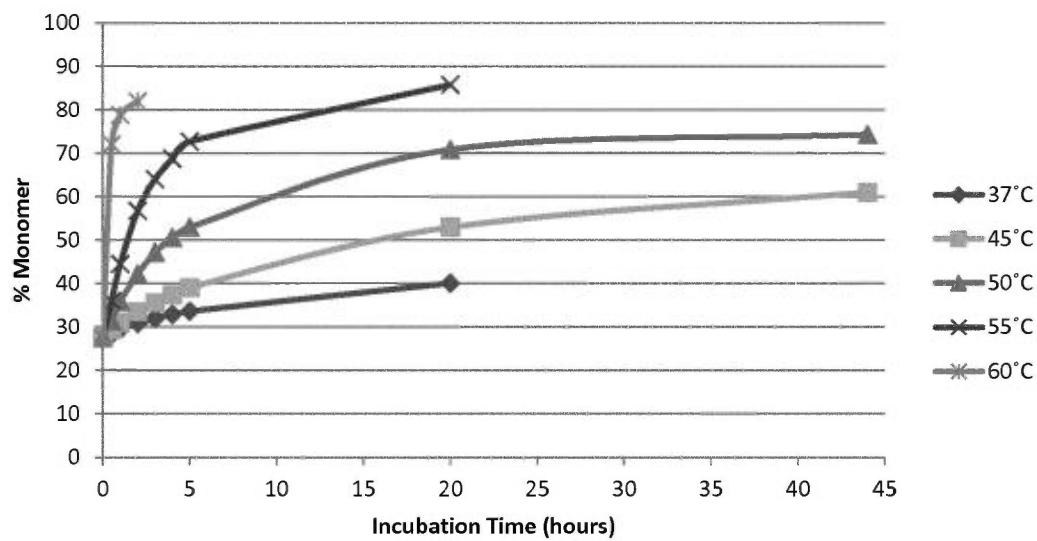
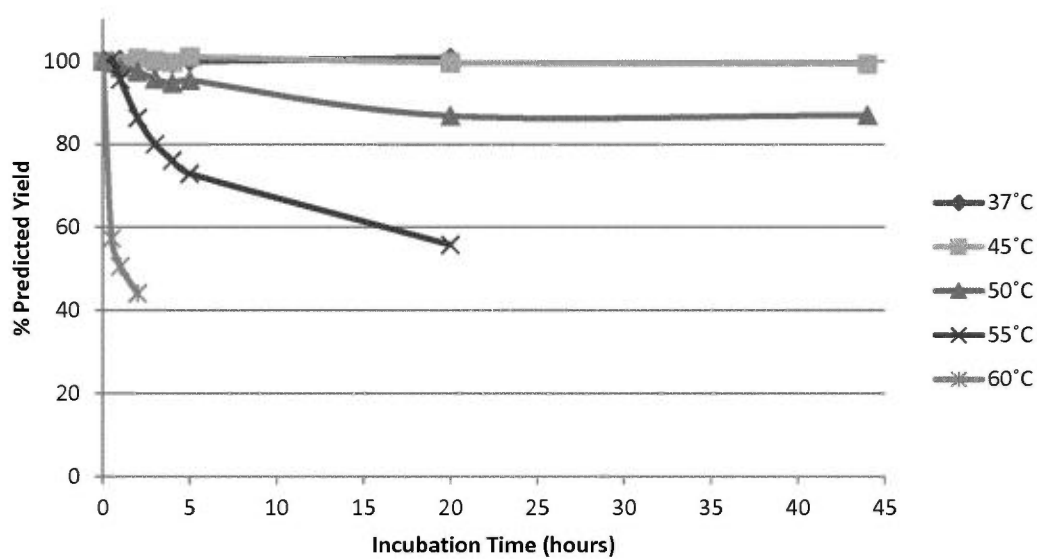


Figure 4



4/29

Figure 5

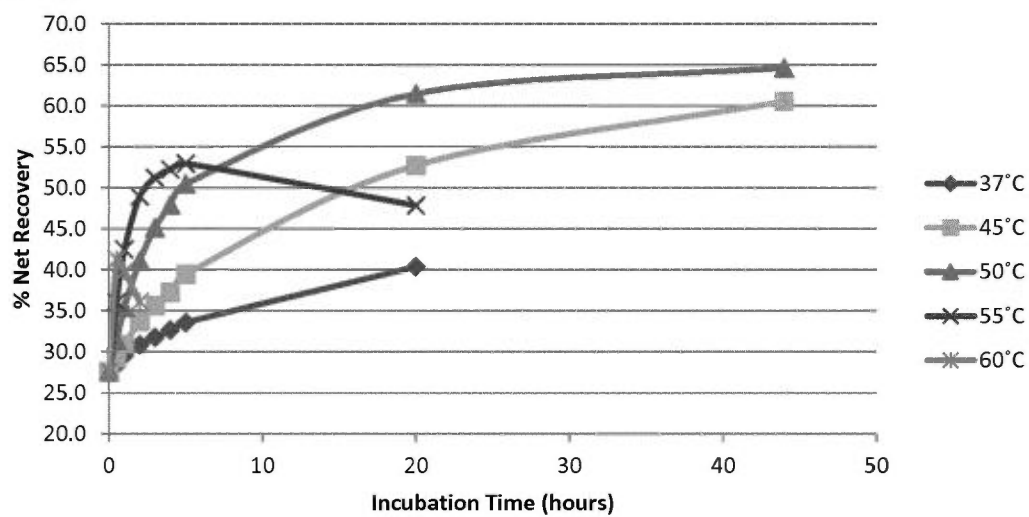
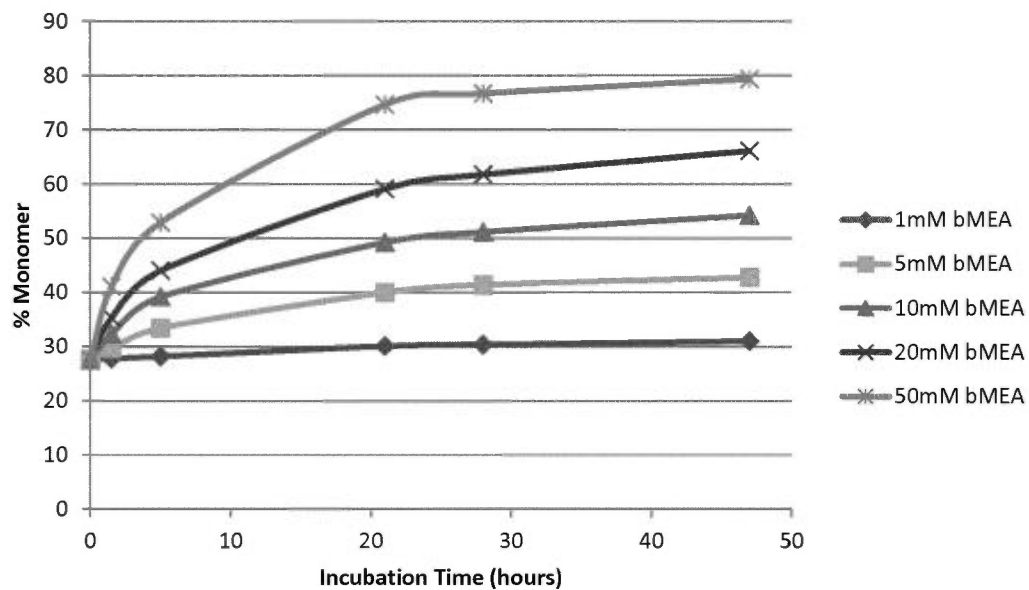


Figure 6



5/29

Figure 7

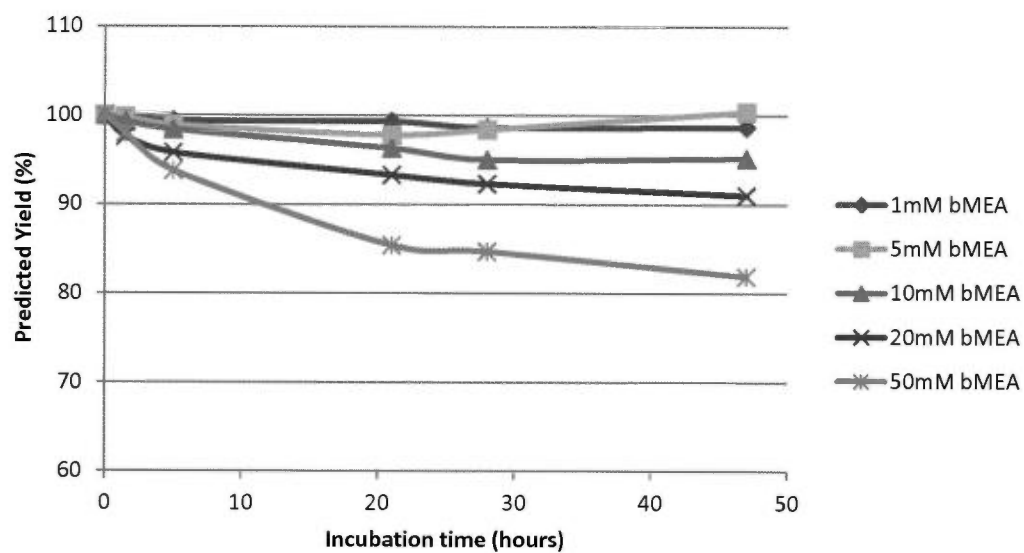
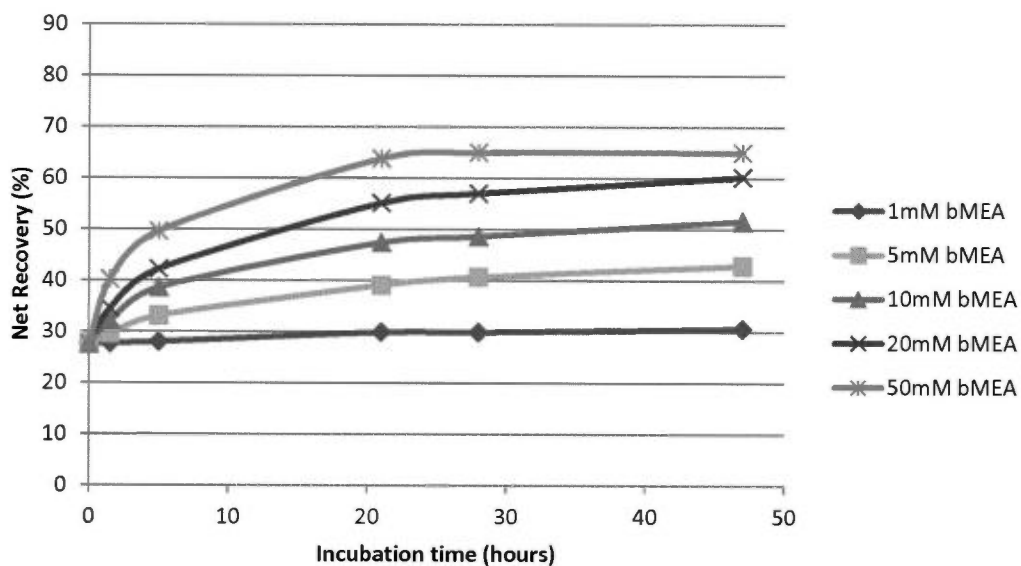


Figure 8



6/29

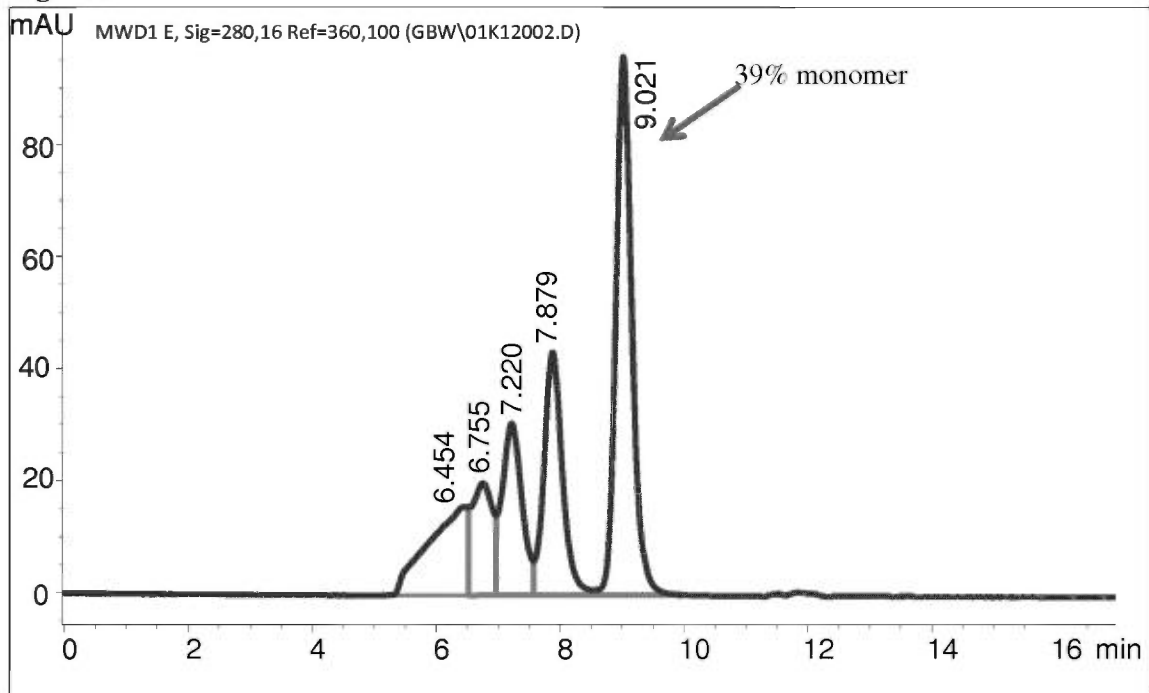
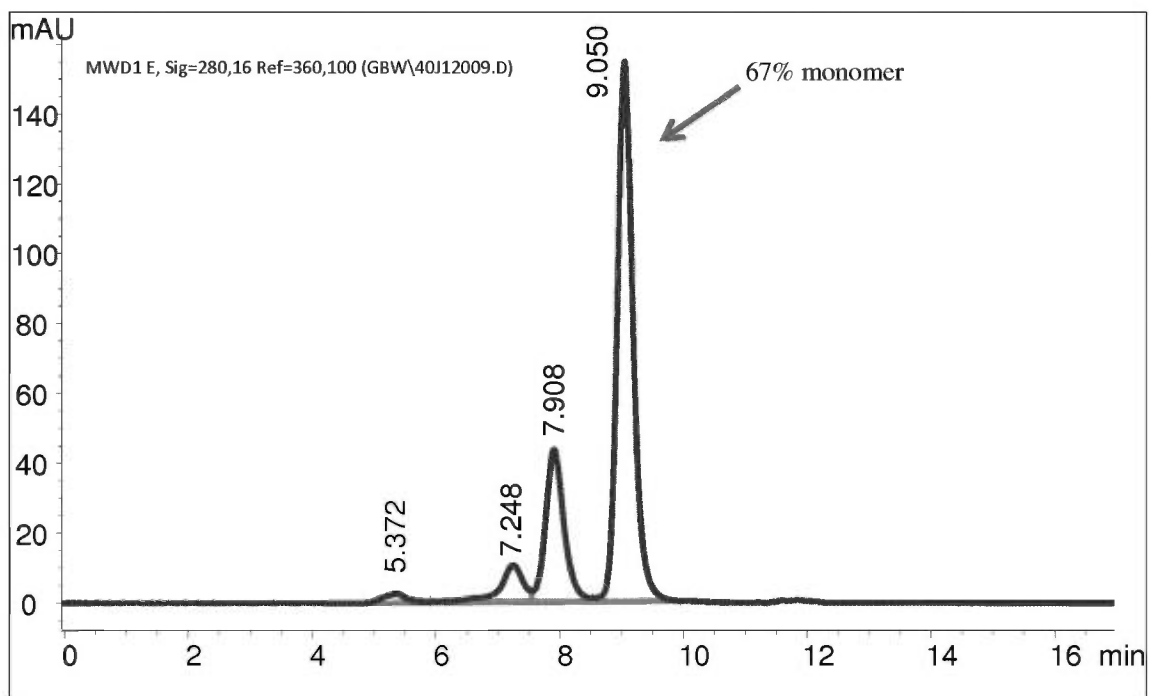
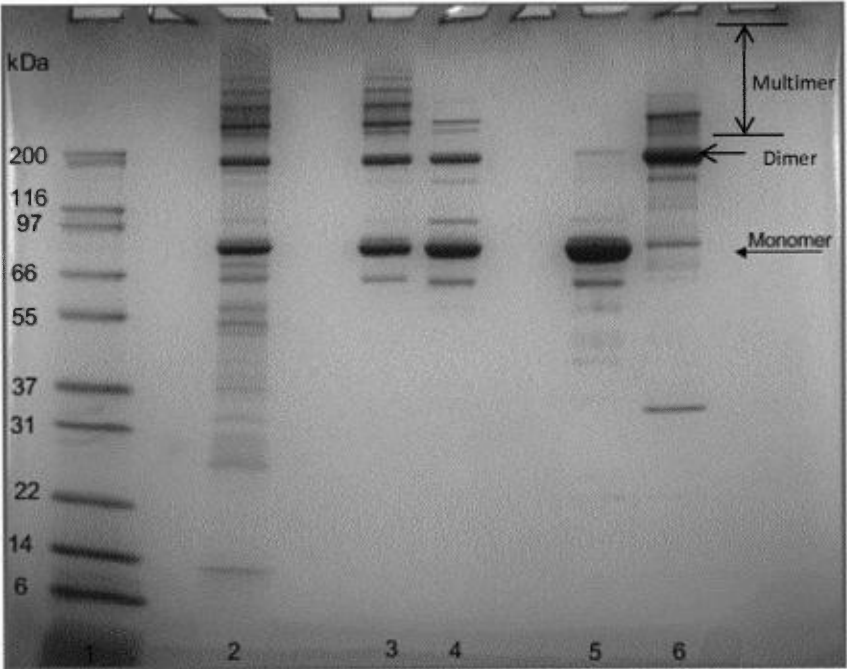
Figure 9**Figure 10**

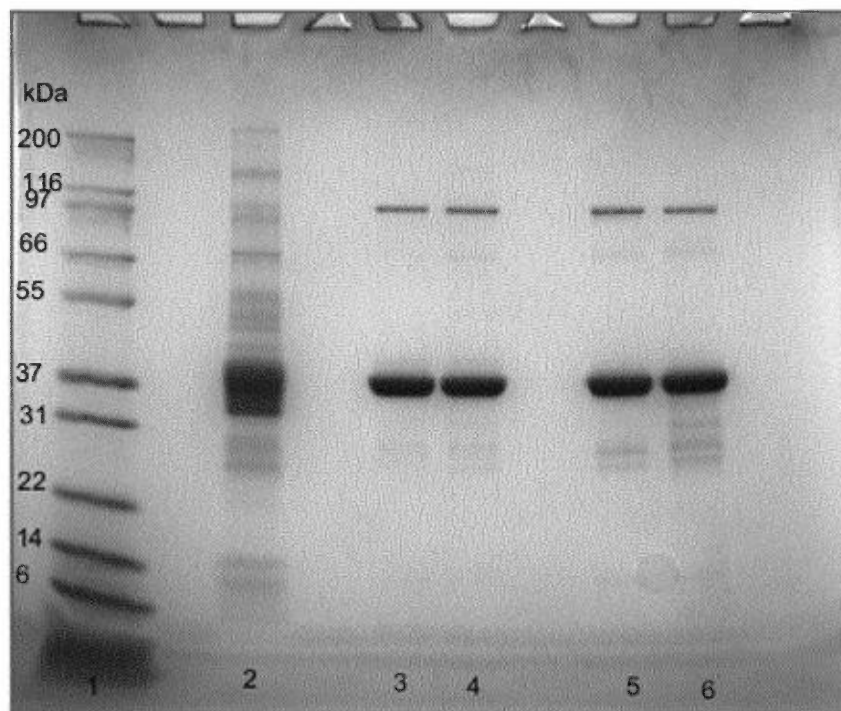
Figure 11



Lane	Sample
1	Novex Mark 12 Molecular Weight Markers
2	A26Fab-645dsFv Clarified Cell Culture Supernatant
3	A26Fab-645dsFv MabSelect Elution @ pH 3.5 (No conversion)
4	A26Fab-645dsFv MabSelect Elution @ pH 3.5 (Supernatant conversion)
5	A26Fab-645dsFv Monomer Reference
6	A26FabFv-645Fv Multimer Reference

8/29

Figure 12



Lane	Sample
1	Novex Mark 12 Molecular Weight Markers
2	A26Fab-645dsFv Clarified Cell Culture Supernatant
3	A26Fab-645dsFv MabSelect Elution @ pH 3.5 (No conversion)
4	A26Fab-645dsFv MabSelect Elution @ pH 3.5 (Supernatant conversion)
5	A26Fab-645dsFv Monomer Reference
6	A26Fab-645dsFv Multimer Reference

9/29

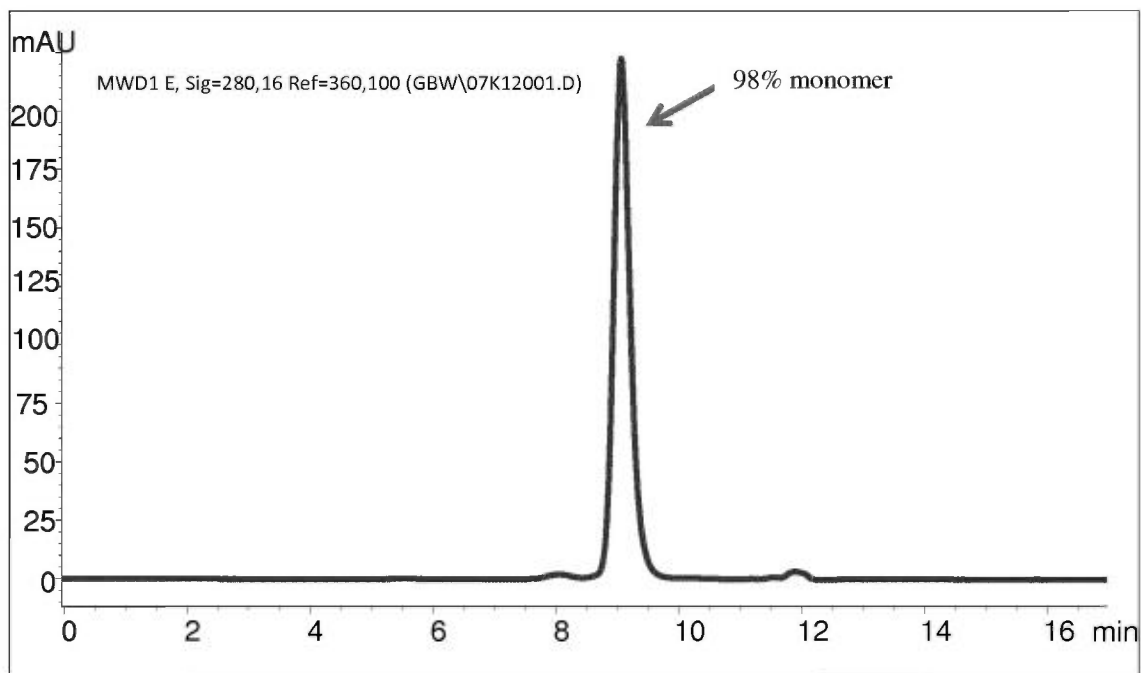
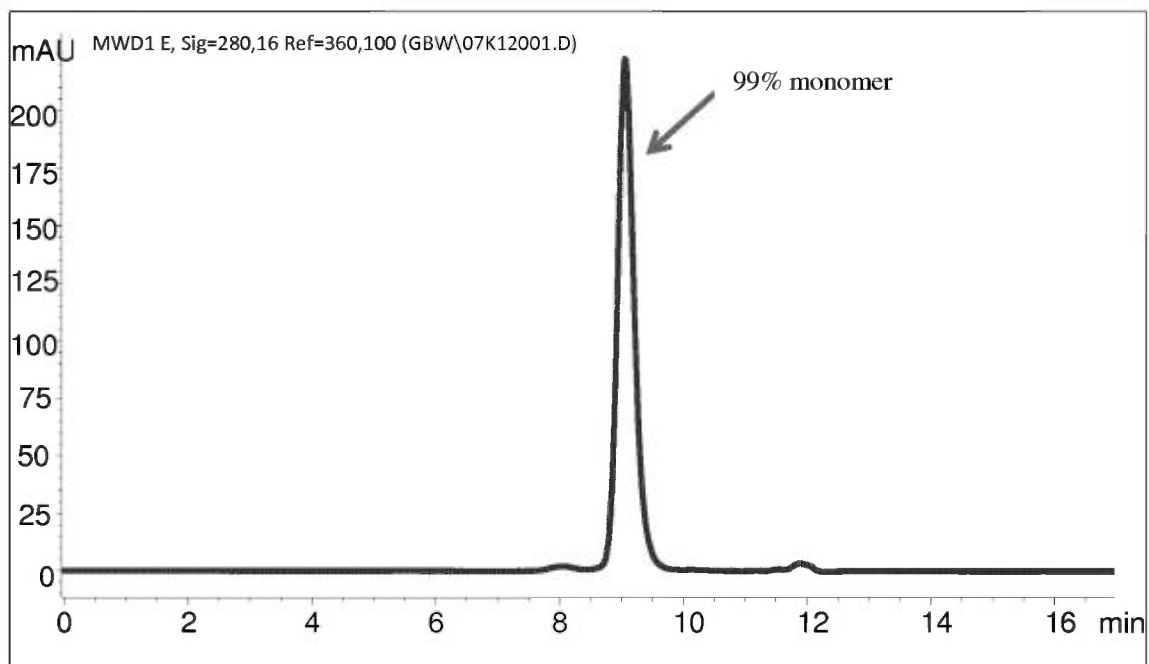
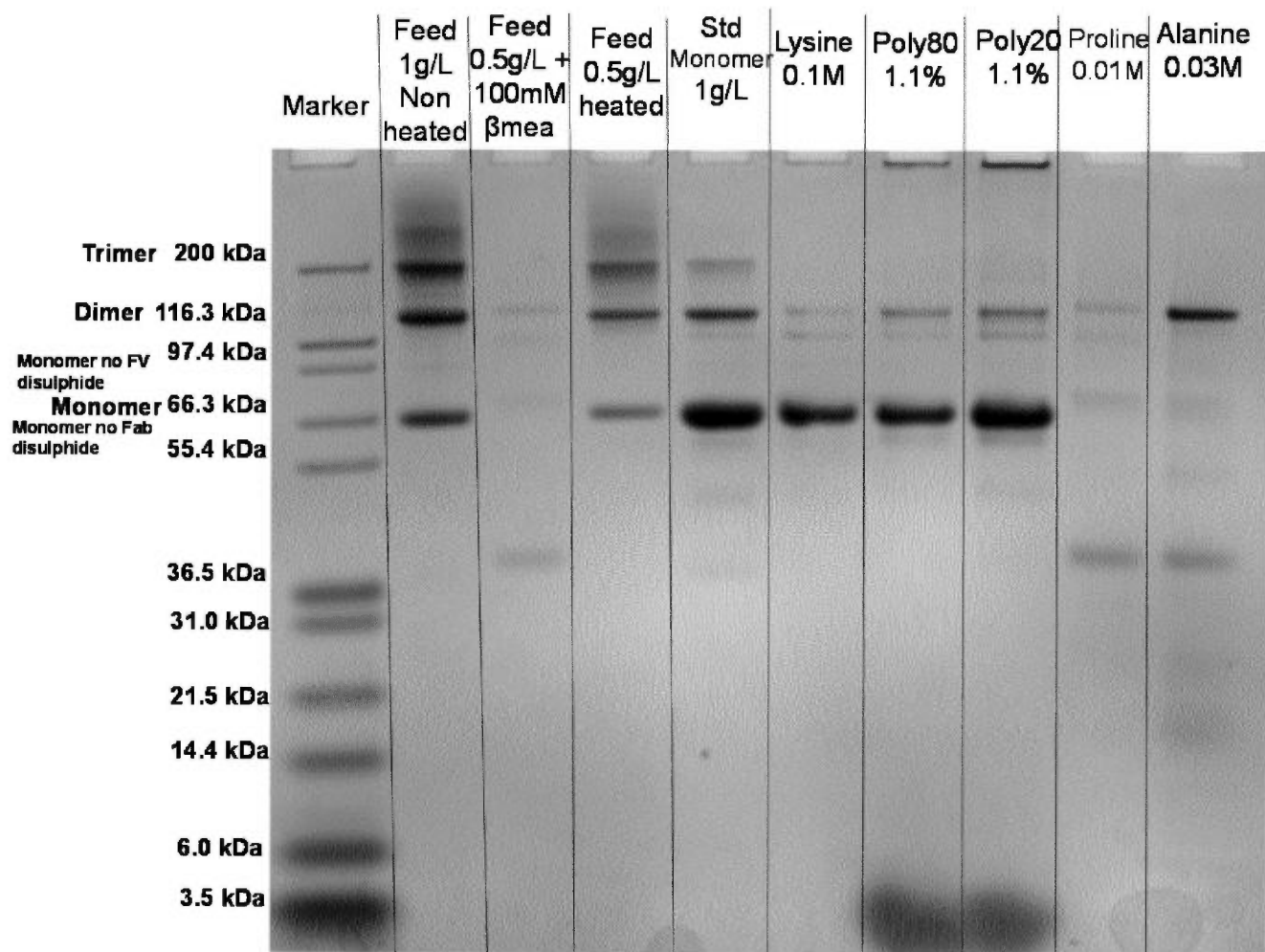
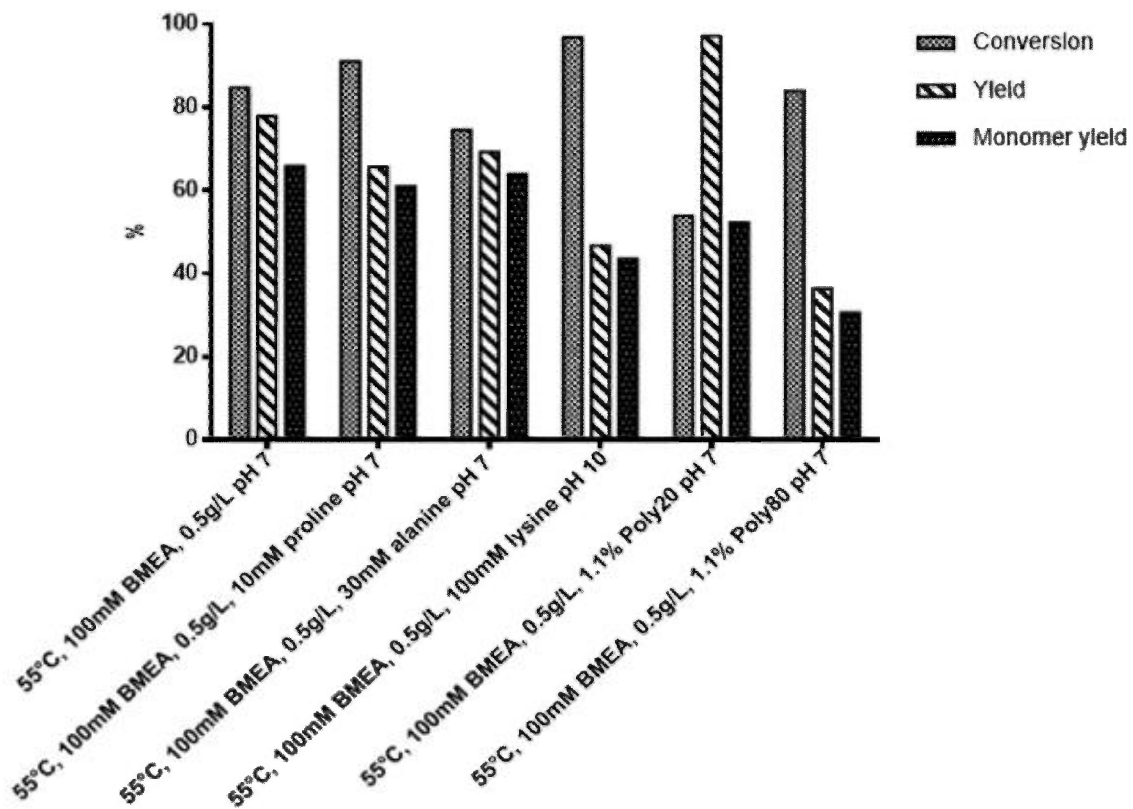
Figure 13**Figure 14**

Figure 15



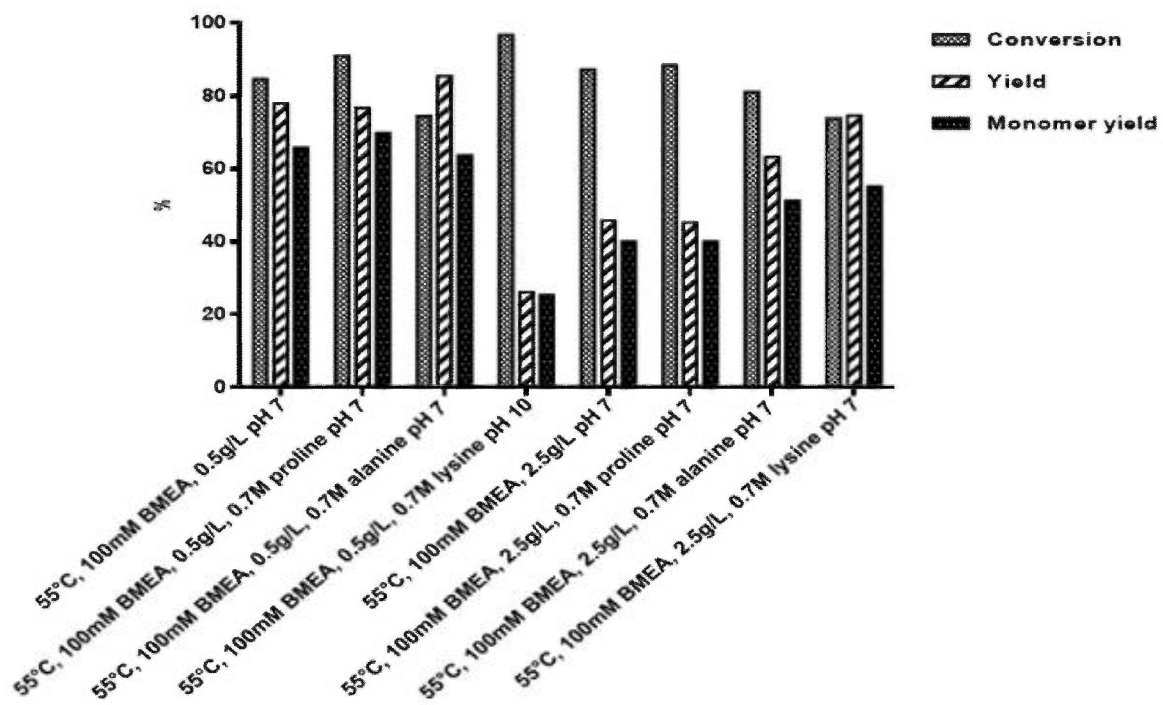
11/29

Figure 16a



12/29

Figure 16b



13/29

Figure 17a

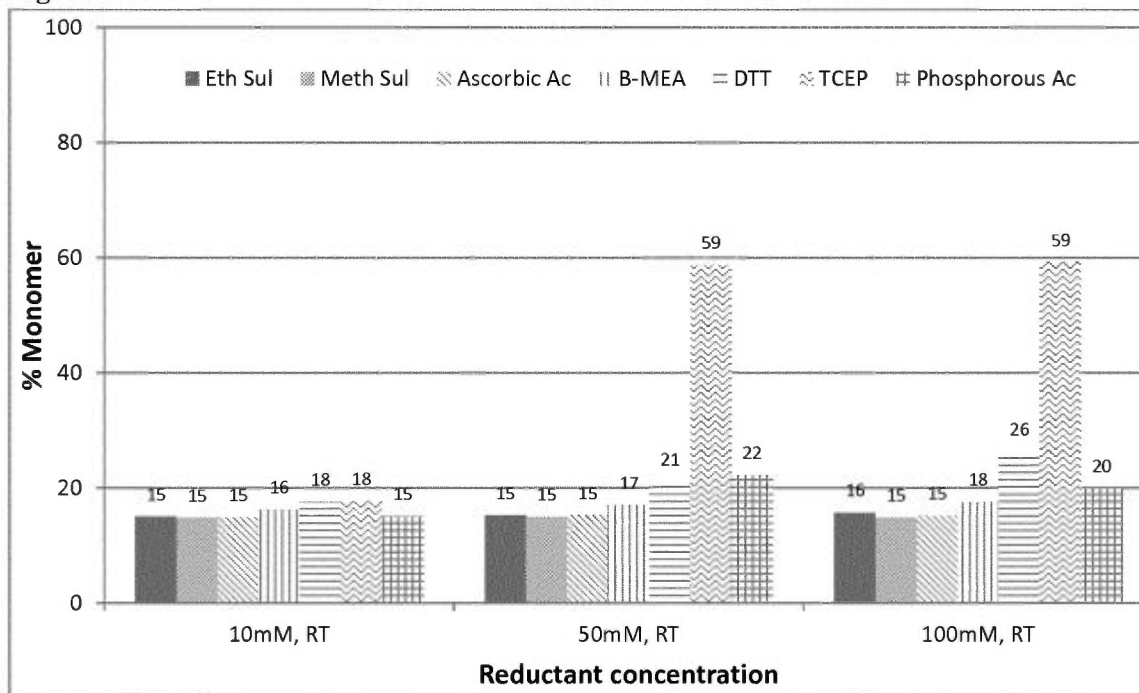
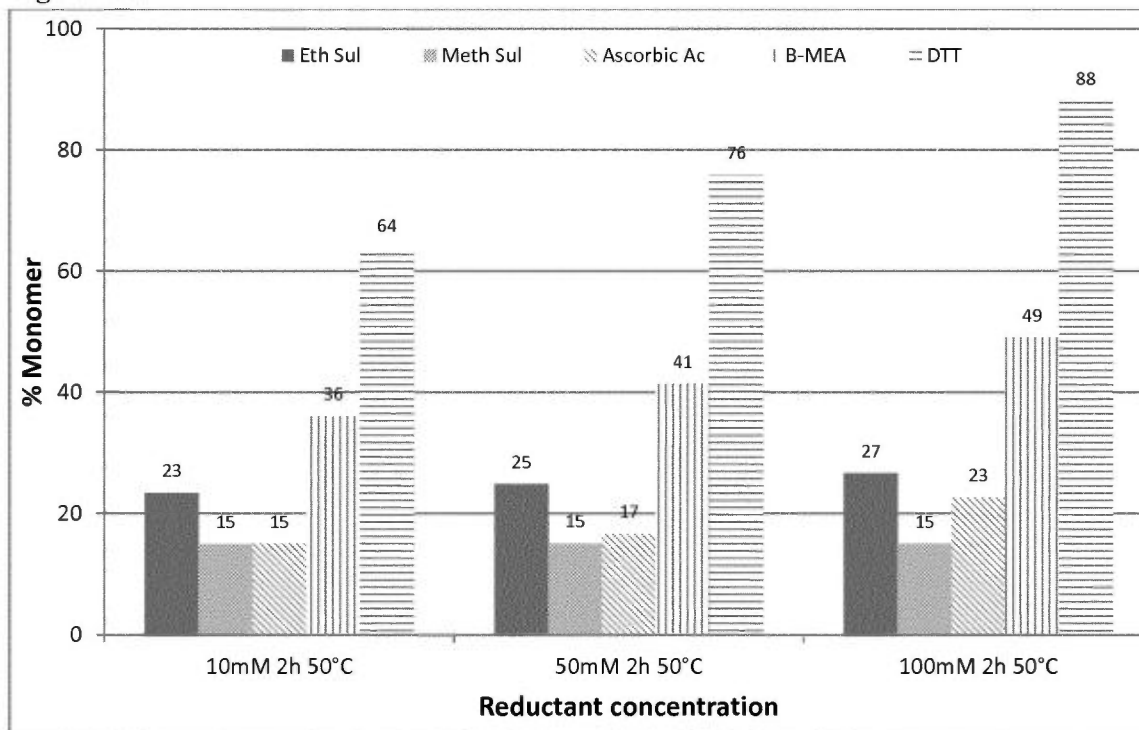


Figure 17b



14/29

Figure 18a

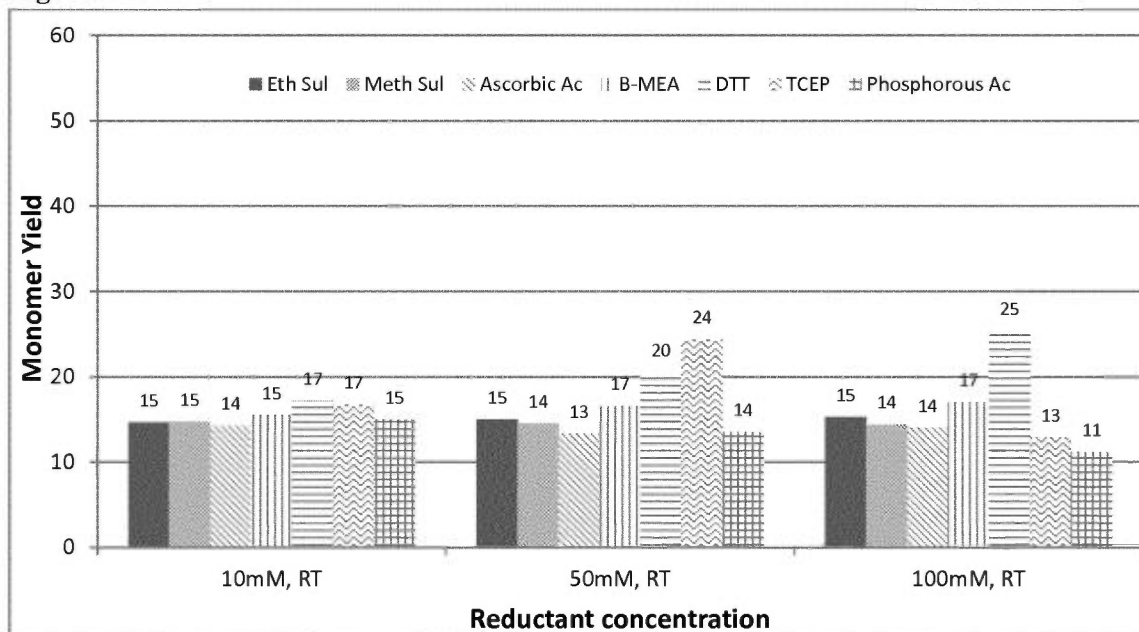
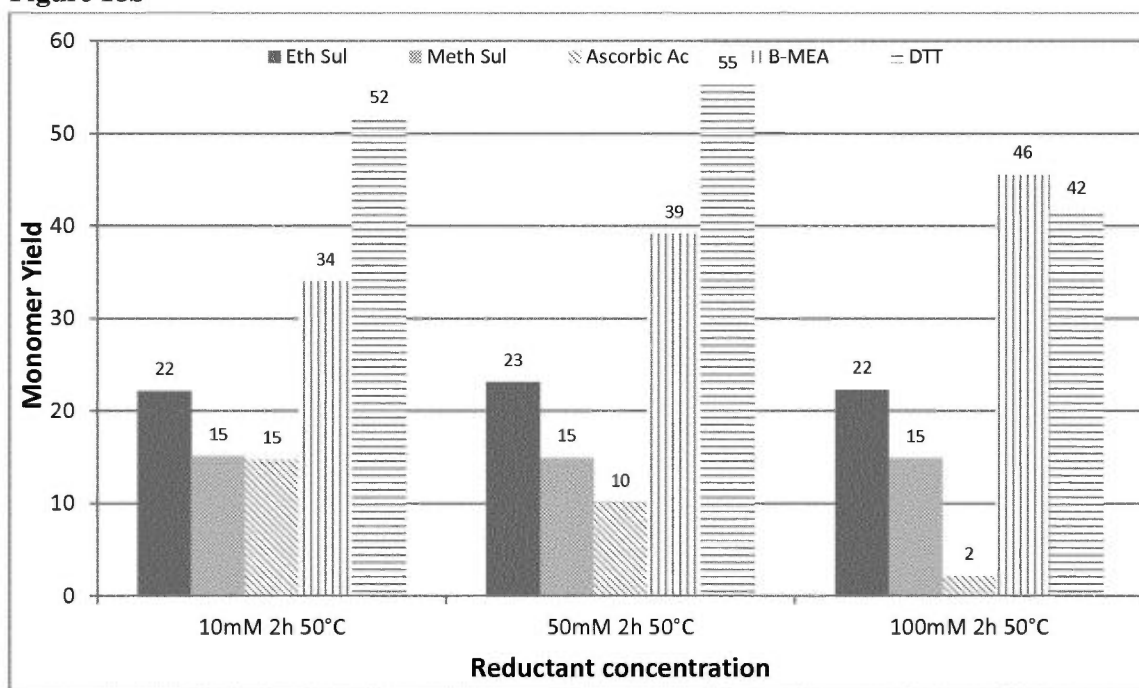


Figure 18b



15/29

Figure 19

(a) Light chain variable region of antibody A26 specific to OX40 (SEQ ID NO:7)

DIQMTQSPSSLSASVGDRVTITCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTISLQPEDFATYYCQQYYDYPLTFGGGTKVEIKR

(b) Heavy chain variable region of antibody A26 specific to OX40 (SEQ ID NO:8)

EVQLVESGGGLVQPGGSLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGTLLTVSS

(c)

CDRH1: NYGIH (SEQ ID NO:1)
CDRH2: SISPSGGLTYRDSVKG (SEQ ID NO:2)
CDRH3: GGEGIFDY (SEQ ID NO:3)
CDRL1: RATQSIYNALA (SEQ ID NO:4)
CDRL2: NANTLHT (SEQ ID NO:5)
CDRL3: QQYYDYPLT (SEQ ID NO:6)

(d) Light chain of anti-OX40 antibody Fab component (SEQ ID NO:9)

DIQMTQSPSSLSASVGDRVTITCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTISLQPEDFATYYCQQYYDYPLTFGGGTKVEIKRTVAAPSVFIFPPS
DEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKSTYLSSTL
TLISKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(e) Heavy chain of anti-OX40 antibody Fab component (SEQ ID NO:10)

EVQLVESGGGLVQPGGSLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGTLLTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSC

Figure 20

(a) Heavy chain of anti-albumin Fv component (SEQ ID NO:11)

EVQLLESGGGLVQPGGSLRLSCAVSGIDL SNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT LV
TVSS

(b) Light chain of anti-albumin Fv component (SEQ ID NO:12)

DIQMTQSPSSVSASVGDRVTTTCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFSGSGSGTDFTLTISLQPEDFATYYCGGGYSSISD TTFGCGTKVEIKRT

(c) Linker 1 (SEQ ID NO:13)

SGGGSGGGGTGGGS

(d) Linker 2 (SEQ ID NO:14)

GGGGSGGGSGGGGS

(e) A26 Fab Heavy-(G4S,G4T,G4S)-645dsFv(gH5) (SEQ ID NO:15)

EVQLVESGGGLVQPGGSLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGT LVTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCSGGGSGGGGTGGGS
EVQLLESGGGLVQPGGSLRLSCAVSGIDL SNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT LV
TVSS

(f) A26 Fab Light-(3xG4S)-645dsFv(gL4) (SEQ ID NO:16)

DIQMTQSPSSLSASVGDRVTTTCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTISLQPEDFATYYCQYYDYPLTFGGGTKVEIKRTVAAPSVFIFPPS
DEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDYSLSTL
TLKADYEKHKVYACEVTHQGLSSPVTKSFNRGECGGGGSGGGSGGGGSDIQMTQSP
SSVSASVGDRVTTTCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVPSRFSGSGS
GTDFTLTISLQPEDFATYYCGGGYSSISD TTFGCGTKVEIKRT

17/29

Figure 21

(a) 645gH1 heavy chain variable domain (SEQ ID NO:17)

EVQLLESGGGLVQPGGSLRLSCA VSGIDLSNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISR DSTTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGLVTVS
S

(b) 645gL1 light chain variable domain (SEQ ID NO:18)

DIVMTQSPSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFKGSGSGTDFTLTIS SLQPEDFATYYCGGGYSSISD TTFGCGTKVEIK

(c) A26 Fab Heavy-(3xG4S)-645dsFv(gH1) (SEQ ID NO:19)

EVQLVESGGGLVQPGGSLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGLVTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCSGGGGSGGGGSGGGGS
EVQLLESGGGLVQPGGSLRLSCA VSGIDLSNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISR DSTTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGLVTVS
S

(d) A26 Fab Light-(3xG4S)-645dsFv(gL1) (SEQ ID NO:20)

DIQMTQSPSSLSASVGDRVTITCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTIS SLQPEDFATYYCQQYYDYPLTFGGGTKVEIKRTVAAPS VFIFPPS
DEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYLSSTL
TLISKADYEKHKVYACEVTHQGLSSPVTKSFNRGECSGGGGSGGGGSGGGGSDIVMTQS
PSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVPSRFKGS
SGTDFTLTIS SLQPEDFATYYCGGGYSSISD TTFGCGTKVEIK

Figure 22

a) DNA encoding Heavy chain A26-645(gH5) including *E.coli* OmpA leader (SEQ ID NO:21)

ATGAAGAAGACTGCTATAGCGATCGCAGTGGCGCTAGCTGGTTTCGCCACCGTGGC
GCAAGCTGAAGTTCAGCTGGTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGA
GCCTGCGTCTCTTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACT
GGATTCGTCAGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTG
GTGGTCTGACGTACTACCGTGACTCTGTCAAAGGTTCGTTTCACCATCTCTCGTGATG
ACGCGAAAAAACTCTCCGTACCTGCAAATGAACTCTCTGCGTGCAGAAGATACCGCA
GTGTACTACTGCGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACC
CTGGTAACTGTCTCGAGCGCTTCTACAAAGGGCCCAAGCGTTTTCCTCACTGGCTCCG
TCCTCTAAATCCACCTCTGGTGGTACGGCTGCACTGGGTGCGCTGGTGAAAGACTAC
TCCCCAGAACCAGTTACCGTGTCTTGGAACCTCTGGTGCCTGACCTCTGGTGTTCAC
ACCTTTCAGCAGTTCTCCAGTCTTCTGGTCTGTACTCCCTGTCTAGCGTGGTTACCG
TTCCGTCTTCTTCTCTGGGTACTCAGACCTACATCTGCAACGTCAACCACAAACCGTC
CAACACCAAGGTTCGACAAAAAAGTCGAGCCGAAATCCTGTAGTGGAGGTGGGGGCT
CAGGTGGAGGCGGGACCGGTGGAGGTGGCAGCGAGGTTCAACTGCTTGAGTCTGGA
GGAGGCCTAGTCCAGCCTGGAGGGAGCCTGCGTCTCTCTTGTGCAGTAAGCGGCATC
GACCTGAGCAATTACGCCATCAACTGGGTGAGACAAGCTCCGGGGAAGTGTTTAGA
ATGGATCGGTATAATATGGGCCAGTGGGACGACCTTTTATGCTACATGGGCGAAAG
GAAGGTTTACAATTAGCCGGGACAATAGCAAAAACACCGTGTATCTCCAAATGAAC
TCCTTGCGAGCAGAGGACACGGCGGTGTACTATTGTGCTCGCACTGTCCAGGTTAT
AGCACTGCACCCCTACTTCGATCTGTGGGGACAAGGGACCCTGGTGACTGTTTCAAGT
TAA

b) DNA encoding Heavy chain A26-645(gH5) (SEQ ID NO:22)

GAAGTTCAGCTGGTTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACTGGATTTCG
CAGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTGGTGGTCTG
ACGTACTACCGTGACTCTGTCAAAGGTTCGTTTCACCATCTCTCGTGATGACGCGAAA
AACTCTCCGTACCTGCAAATGAACTCTCTGCGTGCAGAAGATACCGCAGTGTACTAC
TGCGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACCCTGGTAACT
GTCTCGAGCGCTTCTACAAAGGGCCCAAGCGTTTTCCTCACTGGCTCCGTCTCTAAA
TCCACCTCTGGTGGTACGGCTGCACTGGGTGCGCTGGTGAAAGACTACTTCCCAGAA
CCAGTTACCGTGTCTTGGAACCTCTGGTGCCTGACCTCTGGTGTTCACACCTTTCAG
CAGTTCTCCAGTCTTCTGGTCTGTACTCCCTGTCTAGCGTGGTTACCGTTCCTCTTCT
TCTCTGGGTACTCAGACCTACATCTGCAACGTCAACCACAAACCGTCCAACACCAAG
GTCGACAAAAAAGTCGAGCCGAAATCCTGTAGTGGAGGTGGGGGCTCAGGTGGAGG
CGGGACCGGTGGAGGTGGCAGCGAGGTTCAACTGCTTGAGTCTGGAGGAGGCCTAG
TCCAGCCTGGAGGGAGCCTGCGTCTCTCTTGTGCAGTAAGCGGCATCGACCTGAGCA
ATTACGCCATCAACTGGGTGAGACAAGCTCCGGGGAAGTGTTTAGAATGGATCGGT

19/29

ATAATATGGGCCAGTGGGACGACCTTTTATGCTACATGGGCGAAAGGAAGGTTTAC
AATTAGCCGGGACAATAGCAAAAACACCGTGTATCTCCAAATGAACTCCTTGCGAG
CAGAGGACACGGCGGTGTACTATTGTGCTCGCACTGTCCCAGGTTATAGCACTGCAC
CCTACTTCGATCTGTGGGGACAAGGGACCCTGGTGACTGTTTCAAGTTAA

Figure 23

a) DNA encoding Light chain A26-645(gL4) including E.coli OmpA leader (SEQ ID NO:23)

ATGAAAAAGACAGCTATCGCAATTGCAGTGGCGTTGGCTGGTTTCGCGACCGTTGCG
CAAGCTGATATCCAGATGACCCAGAGCCCAAGCAGTCTCTCCGCCAGCGTAGGCGA
TCGTGTGACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTA
TCAGCAGAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGC
ATACTGGTGTTCCTGCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGAC
CATCTCCTCTCTCCAGCCGGAAGATTTTCGCGACCTACTACTGCCAGCAGTACTACGA
TTACCCACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTTGCAGC
TCCATCCGCTCTTCATCTTTCCACCGTCTGACGAACAGCTCAAATCTGGTACTGCTTCT
GTCGTTTGCTCCTGAACAACTTCTATCCGCGTGAAGCGAAAGTCCAGTGGAAAGTC
GACAACGCACTCCAGTCTGGTAACTCTCAGGAATCTGTGACCGAACAGGACTCCAA
AGACTCCACCTACTCTCTGTCTAGCACCTGACTCTGTCCAAAGCAGACTACGAGAA
ACACAAAGTGTACGCTTGCGAAGTTACCCATCAGGGTCTGAGCTCTCCGGTTACCAA
ATCCTTTAATAGAGGGGAGTGTGGTGGCGGTGGCAGTGGTGGTGGAGGTTCCGGAG
GTGGCGGTTACAGACATACAAATGACCCAGAGTCCCTTCATCGGTATCCGCGTCCGTTG
GCGATAGGGTGACTATTACATGTCAAAGCTCTCCTAGCGTCTGGAGCAATTTTCTAT
CCTGGTATCAACAGAAACCGGGGAAGGCTCCAAAACCTTCTGATTTATGAAGCCTCG
AAACTCACCAAGTGGAGTTCCGTCAAGATTCAGTGGCTCTGGATCAGGGACAGACTTC
ACGTTGACAATCAGTTCGCTGCAACCAGAGGACTTTGCGACCTACTATTGTGGTGGAA
GGTTACAGTAGCATAAGTGATACGACATTTGGGTGCGGTACTAAGGTGGAAATCAA
ACGTACCTAA

b) DNA encoding Light chain A26-645(gL4) (SEQ ID NO:24)

GATATCCAGATGACCCAGAGCCCAAGCAGTCTCTCCGCCAGCGTAGGCGATCGTGT
GACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTATCAGCA
GAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGCATACTG
GTGTTCCGTCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGACCATCTC
CTCTCTCCAGCCGGAAGATTTTCGCGACCTACTACTGCCAGCAGTACTACGATTACCC
ACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTTGCAGCTCCATC
CGTCTTCATCTTTCCACCGTCTGACGAACAGCTCAAATCTGGTACTGCTTCTGTGCTT
TGCCTCCTGAACAACTTCTATCCGCGTGAAGCGAAAGTCCAGTGGAAAGTCGACAA
CGCACTCCAGTCTGGTAACTCTCAGGAATCTGTGACCGAACAGGACTCCAAAGACTC
CACCTACTCTCTGTCTAGCACCTGACTCTGTCCAAAGCAGACTACGAGAAACACAA
AGTGTACGCTTGCGAAGTTACCCATCAGGGTCTGAGCTCTCCGGTTACCAAATCCTT
TAATAGAGGGGAGTGTGGTGGCGGTGGCAGTGGTGGTGGAGGTTCCGGAGGTGGCG
GTTACAGACATACAAATGACCCAGAGTCCCTTCATCGGTATCCGCGTCCGTTGGCGATA
GGGTGACTATTACATGTCAAAGCTCTCCTAGCGTCTGGAGCAATTTTCTATCCTGGT
ATCAACAGAAACCGGGGAAGGCTCCAAAACCTTCTGATTTATGAAGCCTCGAAACTC
ACCAGTGGAGTTCCGTCAAGATTCAGTGGCTCTGGATCAGGGACAGACTTCACGTTG

21/29

ACAATCAGTTCGCTGCAACCAGAGGACTTTGCGACCTACTATTGTGGTGGAGGTTAC
AGTAGCATAAGTGATACGACATTTGGGTGCGGTACTAAGGTGGAAATCAAACGTAC
CTAA

Figure 24

a) DNA encoding Heavy chain A26-645(gH5) including B72.3 leader sequence (SEQ ID NO:25)

ATGGAATGGTCCCTGGGTCTTCCCTGTTTTTCCTTTCTGTCACAACCGGGGTGCACAGCG
AGGTGCAGCTCGTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGAGCCTGCGT
CTCTCTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACTGGATTTCGTC
AGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTGGTGGTCTGA
CGTACTACCGTGACTCTGTCAAAGGTCGTTTCACCATCTCTCGTGATGACGCGAAAA
ACTCTCCGTACCTGCAGATGAACTCTCTGCGTGCAGAAGATACCGCAGTGTACTACT
GCGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACCCTGGTAACTG
TCTCAAGCGCTTCTACAAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGA
GCACCTCTGGGGGCACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAA
CCGGTGACGGTGTCGTGGAATCAGGCGCCCTGACCAGCGGCGTGCACACCTTCCC
GGCTGTCCTACAGTCCTCTGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTC
CAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGCCCAGCAACA
CCAAGGTGGACAAGAAAGTTGAGCCCAAATCTTGTTCCGGAGGTGGCGGTTCCGGA
GGTGGCGGTACCGGTGGCGGTGGATCCGAAGTCCAGCTGCTTGAATCCGGAGGCGG
ACTCGTGCAGCCCGGAGGCAGTCTTCGCTTGTCTGCGCTGTATCTGGAATCGACCT
GAGCAATTACGCCATCAACTGGGTGAGACAGGCACCTGGGAAATGCCTCGAATGGA
TCGGCATTATATGGGCTAGTGGGACGACCTTTTATGCTACATGGGCGAAGGGTAGAT
TCACAATCTCACGGGATAATAGTAAGAACACAGTGTACCTGCAGATGAACTCCCTGC
GAGCAGAGGATAACCGCCGTTTACTATTGTGCTCGCACTGTCCCAGGTTATAGCACTG
CACCTACTTTGATCTGTGGGGGCAGGGCACTCTGGTCACCGTCTCGAGTTGA

b) DNA encoding Heavy chain A26-645(gH5) (SEQ ID NO:26)

GAGGTGCAGCTCGTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACTGGATTTCGT
CAGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTGGTGGTCTG
ACGTACTACCGTGACTCTGTCAAAGGTCGTTTCACCATCTCTCGTGATGACGCGAAA
AACTCTCCGTACCTGCAGATGAACTCTCTGCGTGCAGAAGATACCGCAGTGTACTAC
TGCGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACCCTGGTAACT
GTCTCAAGCGCTTCTACAAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAG
AGCACCTCTGGGGGCACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGA
ACCGGTGACGGTGTCGTGGAATCAGGCGCCCTGACCAGCGGCGTGCACACCTTCC
CGGCTGTCCTACAGTCCTCTGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCT
CCAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGCCCAGCAAC
ACCAAGGTGGACAAGAAAGTTGAGCCCAAATCTTGTTCCGGAGGTGGCGGTTCCGG
AGGTGGCGGTACCGGTGGCGGTGGATCCGAAGTCCAGCTGCTTGAATCCGGAGGCG
GACTCGTGCAGCCCGGAGGCAGTCTTCGCTTGTCTGCGCTGTATCTGGAATCGACC
TGAGCAATTACGCCATCAACTGGGTGAGACAGGCACCTGGGAAATGCCTCGAATGG
ATCGGCATTATATGGGCTAGTGGGACGACCTTTTATGCTACATGGGCGAAGGGTAGA

23/29

TTCACAATCTCACGGGATAATAGTAAGAACACAGTGTACCTGCAGATGAACTCCCTG
CGAGCAGAGGATACCGCCGTTTACTATTGTGCTCGCACTGTCCCAGGTTATAGCACT
GCACCCTACTTTGATCTGTGGGGGCAGGGCACTCTGGTCACCGTCTCGAGTTGA

Figure 25

a) DNA encoding Light chain A26-645(gL4) including B72.3 leader sequence (SEQ ID NO:27)

ATGTCAGTTCCCACACAGGTGCTGGGCTGCTTCTGTTGTGGCTCACCGATGCTAGG
TGTGATATCCAGATGACCCAGAGTCCAAGCAGTCTCTCCGCCAGCGTAGGCGATCGT
GTGACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTATCAG
CAGAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGCATAC
CGGTGTTCCGTCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGACCATC
TCCTCTCTGCAGCCGGAAGATTTTCGCGACCTACTACTGCCAGCAGTACTACGATTAC
CCACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTGGCTGCACCA
TCTGTCTTCATCTTCCCCCATCTGATGAGCAGTTGAAGTCTGGCACTGCCTCTGTTG
TGTGCCGTGCTGAATAACTTCTACCCTAGAGAGGCCAAAGTCCAGTGGAAGGTGGAT
AACGCCCTTCAATCCGGAAACTCCCAGGAGAGTGTCACTGAGCAGGACTCAAAGGA
CTCCACCTATAGCCTTAGCAGCACACTGACACTGAGCAAGGCTGACTACGAGAAAC
ACAAGGTCTACGCCTGCGAAGTGACACATCAAGGCCTGAGCTCACCCGTGACAAAG
AGCTTTAACAGGGGAGAGTGTGGTGGAGGTGGCTCTGGCGGTGGTGGCTCCGGAGG
CGGAGGAAGCGACATCCAGATGACCCAGAGCCCTTCCTCTGTAAGCGCCAGTGTCTG
GAGACAGAGTGACTATTACCTGCCAAAGCTCCCCTTCAGTCTGGTCCAATTTTCTAT
CCTGGTACCAGCAAAAGCCCGGAAAGGCTCCTAAATTGCTGATCTACGAAGCAAGC
AAACTCACCAGCGGCGTGCCAGCAGGTTACGCGGCAGTGGGTCTGGAAGTGAATTT
TACCCTGACAATCTCCTCACTCCAGCCCGAGGACTTCGCCACCTATTACTGCGGTGG
AGGTTACAGTAGCATAAGTGATACGACATTTGGATGCGGCACTAAAGTGGAATCA
AGCGTACCTGA

b) DNA encoding Light chain A26-645(gL4) (SEQ ID NO:28)

GATATCCAGATGACCCAGAGTCCAAGCAGTCTCTCCGCCAGCGTAGGCGATCGTGT
GACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTATCAGCA
GAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGCATACCG
GTGTTCCGTCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGACCATCTC
CTCTCTGCAGCCGGAAGATTTTCGCGACCTACTACTGCCAGCAGTACTACGATTACCC
ACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTGGCTGCACCATC
TGTCTTCATCTTCCCCCATCTGATGAGCAGTTGAAGTCTGGCACTGCCTCTGTTGTG
TGCCTGCTGAATAACTTCTACCCTAGAGAGGCCAAAGTCCAGTGGAAGGTGGATAA
CGCCCTTCAATCCGGAAACTCCCAGGAGAGTGTCACTGAGCAGGACTCAAAGGACT
CCACCTATAGCCTTAGCAGCACACTGACACTGAGCAAGGCTGACTACGAGAAACAC
AAGGTCTACGCCTGCGAAGTGACACATCAAGGCCTGAGCTCACCCGTGACAAAGAG
CTTTAACAGGGGAGAGTGTGGTGGAGGTGGCTCTGGCGGTGGTGGCTCCGGAGGCG
GAGGAAGCGACATCCAGATGACCCAGAGCCCTTCCTCTGTAAGCGCCAGTGTCTGGA
GACAGAGTGACTATTACCTGCCAAAGCTCCCCTTCAGTCTGGTCCAATTTTCTATCCT
GGTACCAGCAAAAGCCCGGAAAGGCTCCTAAATTGCTGATCTACGAAGCAAGCAAA
CTCACCAGCGGCGTGCCAGCAGGTTACGCGGCAGTGGGTCTGGAAGTGAATTTACC

25/29

CTGACAATCTCCTCACTCCAGCCCGAGGACTTCGCCACCTATTACTGCGGTGGAGGT
TACAGTAGCATAAGTGATACGACATTTGGATGCGGCACTAAAGTGGAATCAAGCG
TACCTGA

FIGURE 26

(a) Heavy chain variable domain of anti-albumin antibody (no ds) (SEQ ID NO:29)

EVQLLESGGGLVQPGGSLRLSCAVSGIDLSNYAINWVRQAPGKGLEWIGIIWASGTTFY
ATWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT
LTVSS

(b) Heavy chain variable domain of anti-albumin antibody (ds) (SEQ ID NO:30)

EVQLLESGGGLVQPGGSLRLSCAVSGIDLSNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT
LTVSS

(c) Light chain variable domain of anti-albumin antibody (no ds) (SEQ ID NO:31)

DIQMTQSPSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFSGSGSGTDFLTITSSLPEDFATYYCGGGYSSISDITFGGGTKVEIKRT

(d) Light chain variable domain of anti-albumin antibody (ds) (SEQ ID NO:32)

DIQMTQSPSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFSGSGSGTDFLTITSSLPEDFATYYCGGGYSSISDITFGCGTKVEIKRT

(e) Linker 1 (SEQ ID NO:33) SGGGSGGGGTGGGGS

(f) Linker 2 (SEQ ID NO:34) GGGGSGGGGSGGGGS

645 gH5gL4 specific to albumin (SEQ ID NO: 35)

GAGGTT CAGCTGCTGGAGTCTGGAGGCGGGCTTGTC CAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGTAAGCGGCATCGACCTGTCCA ACTACGCGATTAACTGGGTACG
TCAGGCACCGGGTAAAGGTCTGGAATGGATCGGCATCATCTGGGCCTCTGGTACGA
CCTTCTACGCTACTTGGGCCAAAGGTCGTTTACCATCTCCCGTGACAACTCTAAAA
ACACCGTGTACCTGCAGATGAACTCTCTGCGTGCGGAAGACACTGCGGTTTACTATT
GCGCGCGTACCGTTCCGGGCTATTCTACTGCACCGTACTTCGACCTGTGGGGT CAGG
GTACTCTGGTTACCGTCTCGAGTGGAGGTGGCGGTTCTGGCGGTGGCGGTTCCGGTG
GCGGTGGATCGGGAGGTGGCGGTTCTGATATCCAGATGACCCAGAGTCCAAGCAGT
GTTTCCGCCAGCGTAGGCGATCGTGTGACTATTACCTGTCAGTCCTCTCCGAGCGTTT
GGTCCA ACTTCCTGAGCTGGTACCAGCAGAAACCGGGTAAAGCCCCGAACTGCTG
ATCTACGAGGCGTCTAAACTGACCTCTGGTGTACCGTCCCGTTTCTCTGGCTCTGGCT
CTGGTACGGACTTCACTCTGACCATCTCCTCTCTGCAGCCGGAAGACTTTGCAACGT

26/29

ACTACTGCGGTGGTGGTTACTCTTCCATCTCTGACACCACGTTTCGGTGGAGGCACCA
AAGTTGAAATCAAACGTACGCATCACCATCACCATCACCATCACCATCAC

645 gH5gL4 specific to albumin (SEQ ID NO: 36)

EVQLLES GGGLVQPGSLRLSCAVSGIDLSNYAINWVRQAPGKGLEWIGIIWASGTTFY
ATWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT L
VTVSSGGGSGGGSGGGSGGGSGGGSDIQMTQSPSSVSASVGDRVTTTCQSSPSVWSNFL
SWYQQKPGKAPKLLIYEASKLTSGVPSRFSGSGSGTDFTLTISLQPEDFATYYCGGGYS
SISDTTFGGG TKVEIKRTHHHHHHHHHHH

645 gH5gL4ds specific to albumin (SEQ ID NO: 37)

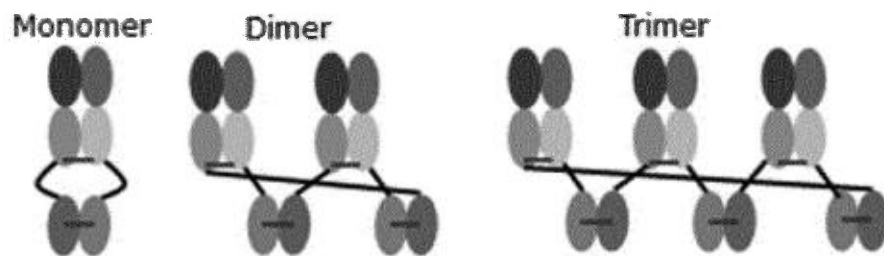
GAGGTT CAGCTGCTGGAGTCTGGAGGCGGGCTTGTC CAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGTAAGCGGCATCGACCTGTCCA ACTACGCGATTA ACTGGGTACG
TCAGGCACCGGGTAAATGCCTGGAATGGATCGGCATCATCTGGGCCTCTGGTACGAC
CTTCTACGCTACTTGGGCCAAAGGTCGTTTCACCATCTCCCGTGACA ACTCTAAAAA
CACCGTGTACCTGCAGATGA ACTCTCTGCGTGC GGAAGACACTGCGGTTACTATTG
CGCGCGTACCGTTCCGGGCTATTCTACTGCACCGTACTTCGACCTGTGGGGTCAGGG
TACTCTGGTTACCGTCTCGAGTGGAGGTGGCGGTTCTGGCGGTGGCGGTTCCGGTGG
CGGTGGATCGGGAGGTGGCGGTTCTGATATCCAGATGACCCAGAGTCCAAGCAGTG
TTTCCGCCAGCGTAGGCGATCGTGTGACTATTACCTGTCAGTCCTCTCCGAGCGTTTG
GTCCA ACTTCCTGAGCTGGTACCAGCAGAAACCGGGTAAAGCCCCGAAACTGCTGA
TCTACGAGGCGTCTAAACTGACCTCTGGTGTACCGTCCCGTTTCTCTGGCTCTGGCTC
TGGTACGGACTTCACTCTGACCATCTCCTCTCTGCAGCCGGAAGACTTTGCAACGTA
CTACTGCGGTGGTGGTTACTCTTCCATCTCTGACACCACGTTTCGGTTGTGGCACCAA
AGTTGAAATCAAACGTACGCATCACCATCACCATCACCATCACCATCAC

645 gH5gL4ds specific to albumin (SEQ ID NO: 38)

EVQLLES GGGLVQPGSLRLSCAVSGIDLSNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT L
TVSSGGGSGGGSGGGSGGGSGGGSDIQMTQSPSSVSASVGDRVTTTCQSSPSVWSNFLS
WYQQKPGKAPKLLIYEASKLTSGVPSRFSGSGSGTDFTLTISLQPEDFATYYCGGGYSSI
SDTTFGCGTKVEIKRTHHHHHHHHHHH

27/29

FIGURE 27

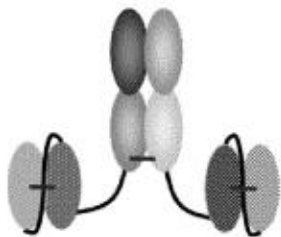
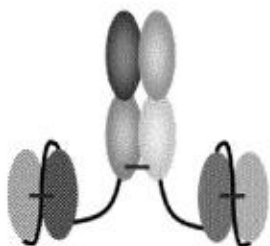
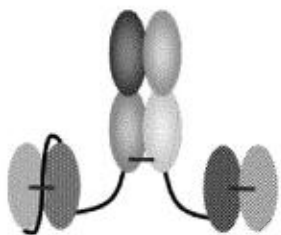
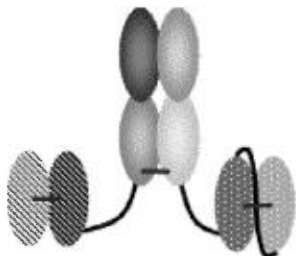


Fab = Heavy and Light Chain of Fab with a disulfide bond between the heavy and light chain and linkers joined to C-terminus of the constant region of the heavy chain and light chain to join to the dsFv



dsFv = disulfide stabilised Fv and linkers to join to the Fab

28/29

FIGURE 28**Fab-2x dsscFv formats and Fab-dsscFv-dsFv format****Fab#2-(HC)-dsscFv#3-(LC)-dsscFv#4****Fab#2-(LC)-dsscFv#3-(HC)-dsscFv#4****Fab-(HC)dsscFv-(LC)dsFv****Fab-(HC)dsFv-(LC)dsscFv**

29/29

FIGURE 29