

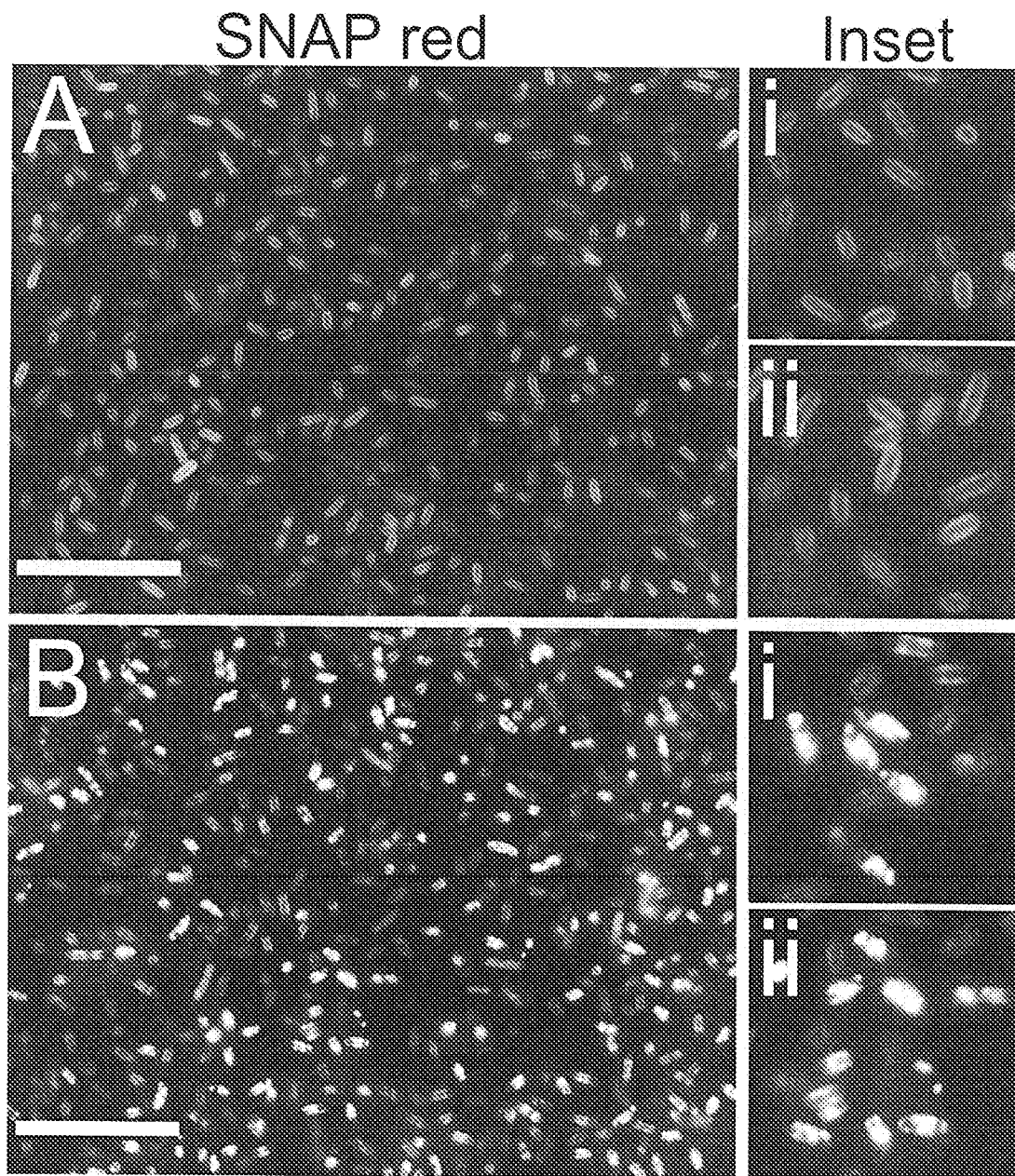
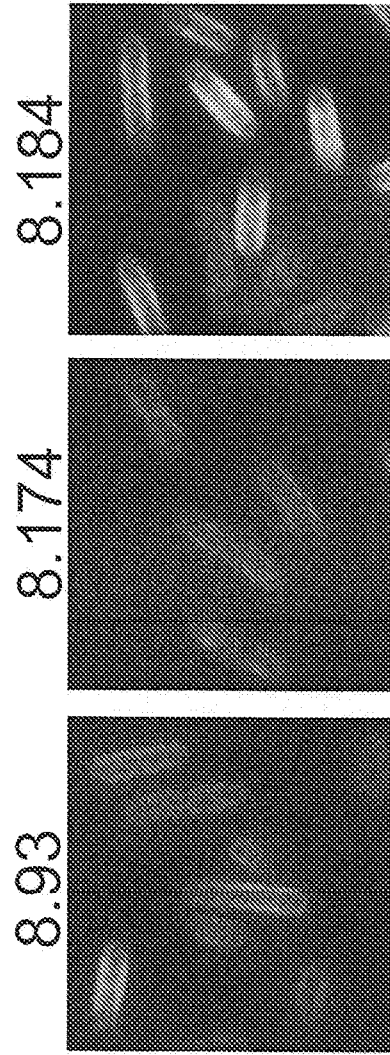


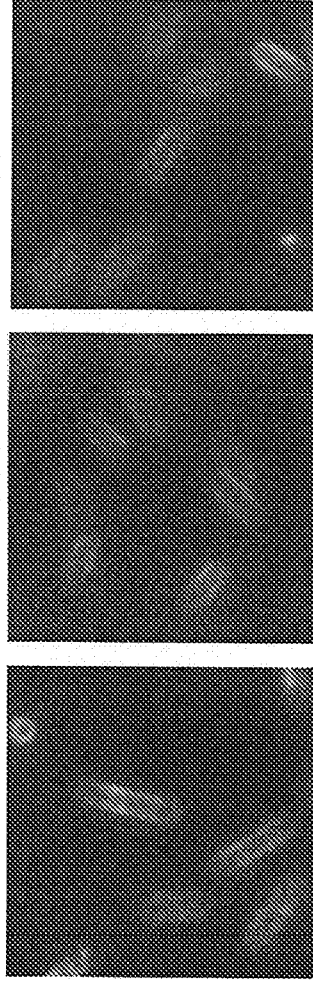
Figure 1



Wildtype ----
8.93
8.184
8.174
1.....10.....20.....30.....40.....50.....60.....70.....80.....90.....

Figure 2

8.186 8.39 9.19



Human
IGLV 3-21

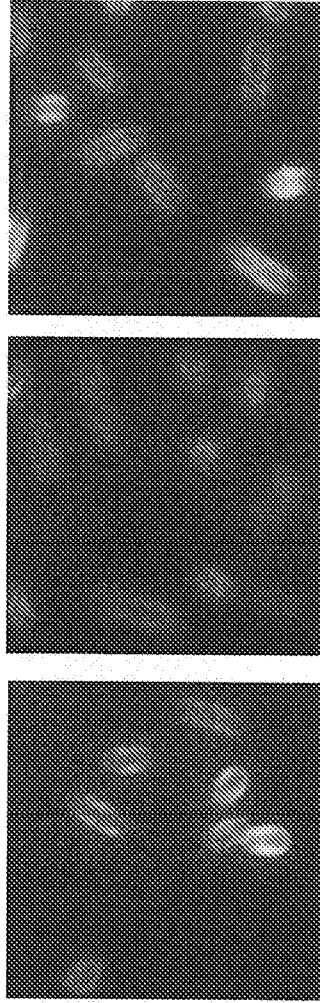
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*****
8.186 MGDGSSVLTQPPAVSVAPEKTAIIACGGHRIGSKSVHWYXXKPGQAPVLVIYDNDRPSGXPERFSGNSGCTATLTIERVEVGDEA (SEQ ID NO:118)
8.39 MGDGSSVLTQPPSVVAPGKTAIIACGGHRIGSKSVHWYXXKPGQAPVLVIYDNDRPSGIPERFSGNSGCTATLTIERVEVGDEA (SEQ ID NO:119)
Wildtype ----QSVLTQPPSVVAPGKTARIICGGNNIGSKSVHWYXXKPGQAPVLVIYDNDRPSGIPERFSGNSGCTATLTIERVEAGDEA (SEQ ID NO:120)
9.19 MGDGSSVLTQPPSVVAPGKTAIIICGGNNIEDKSVHWYXXKPGQAPVLVIYDNDRPSGIPERFSGNSGCTATLTIERVEAGDEA (SEQ ID NO:121)
1.....10.....20.....30.....40.....50.....60.....70.....80.....

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Figure 2 (continued)

16.1	16.121	16.26
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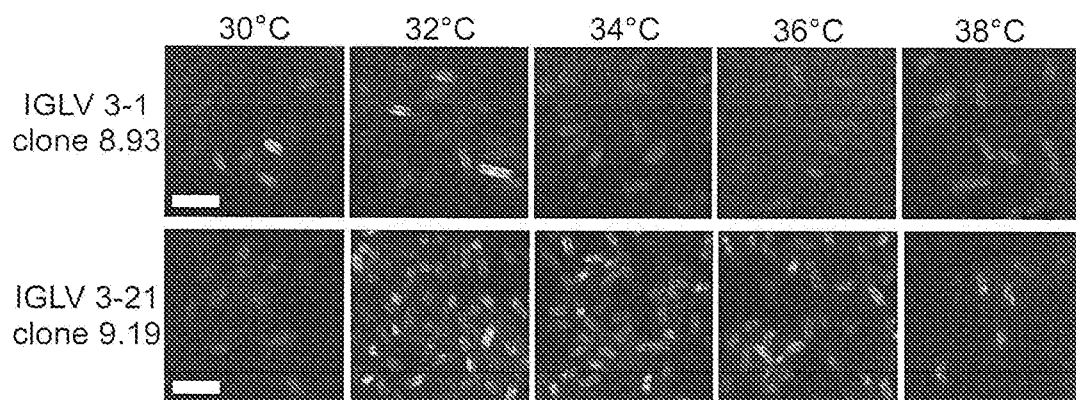


Wildtype
16.26
16.1
16.121

WVFLYQPHVIESPGNVTIFCSGGSGSIAHYVMYQMPGSAFTIIIEDNRFGVPDRFEGSIDSSSRALITISGLKTEDEADNYCYDNI (SEQ ID NO:122)
WVFLYQPHVIESPGNVTIFCSGGSGSIAHYVMYQMPGSAFTIIEEDNRFGVPDRFEGSIDSSSRALITISGLKTEDEADNYCYDNI (SEQ ID NO:123)
WVFLYQPHVIESPGNVTIFCSGGSGSIAHYVMYQMPGSAFTIIEEDNRFGVPDRFEGSIDSSSRALITISGLKTEDEADNYCYDNI (SEQ ID NO:124)
WVFLYQPHVIESPGNVTIFCSGGSGSIAHYVMYQMPGSAFTIIEEDNRFGVPDRFEGSIDSSSRALITISGLKTEDEADNYCYDNI (SEQ ID NO:125)

.....30.....40.....50.....60.....70.....80.....90.....100.....110.....

Figure 2 (continued)

**Figure 3**

S

P

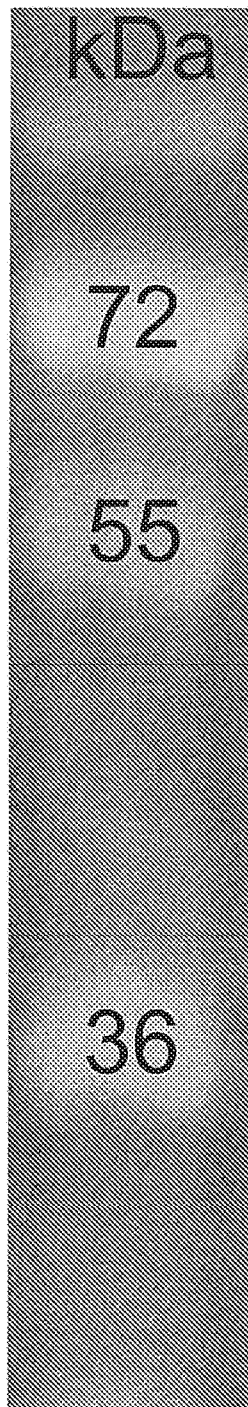
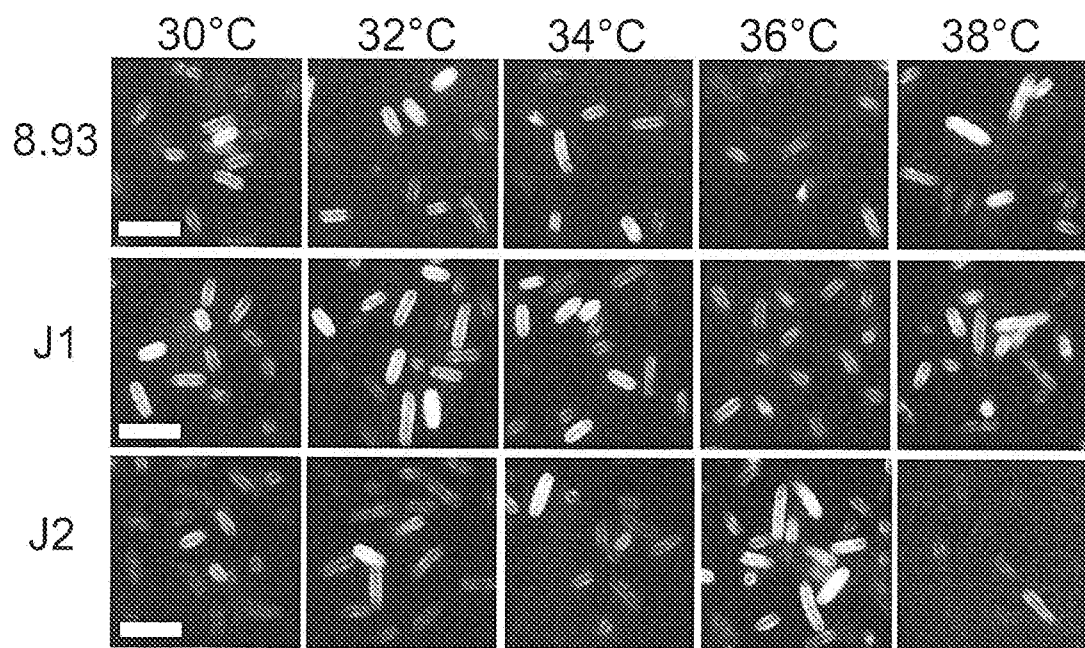


Figure 4

**Figure 5**

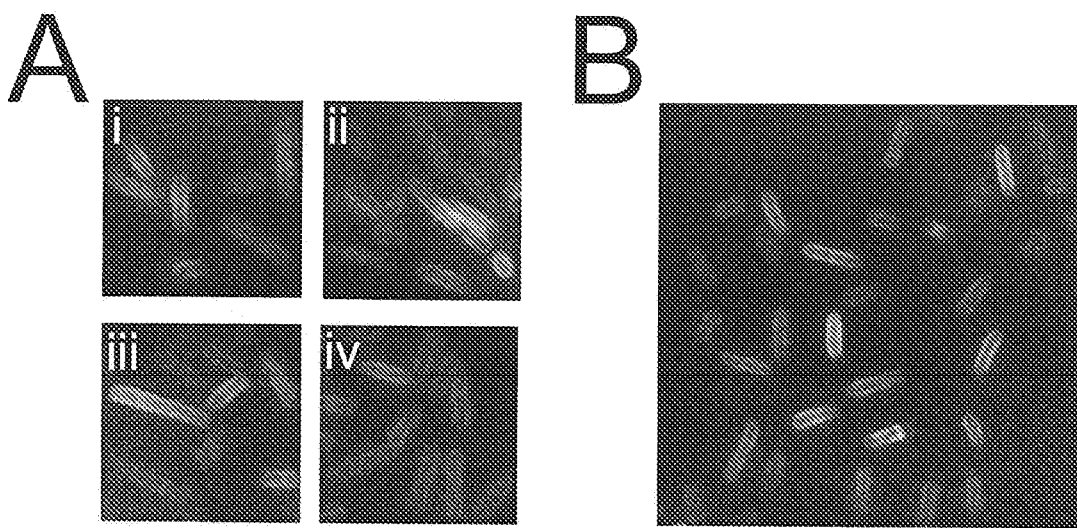


Figure 6

IGLV1-51 (aka DPL5) (SEQ ID NO: 15)
 QSVLTQPPSVSAAPGQKVTISCS**GSSSNIGNNY**VSWYQQLPGTAPKLLIY**DNNKRP**SGIPDRFSGSKSGTSATLGITGLQTGDEADYYCGT**WDSSL**SAG

IGLV1-40 (aka DPL6) (SEQ ID NO: 18)
 QSVLTQPPSVSGAPGQRTISCT**GSSSNIGAGYD**VHWYQQLPGTAPKLLIY**GNSNRPS**GVDPDRFSGSKSGTSASLAITGLQAEDEADYYCQSY**YDSSL**SGS

IGLV1-44 (aka DPL2) (SEQ ID NO: 21)
 QSVLTQPPSASGTPGQRTISCS**GSSSNIGSNT**VNWYQQLPGTAPKLLIY**SNNQRPS**GVDPDRFSGSKSGTSASLAISGLQSEDEADYYCAA**WDDSL**NGP

IGV1-47 (aka DPL3) (SEQ ID NO: 24)
 QSVLTQPPSASGTPGQRTISCS**GSSSNIGSNY**VWYQQLPGTAPKLLIY**SNNQRPS**GVDPDRFSGSKSGTSASLAISGLRSEDEADYYCAA**WDDSL**SGP

IGLV3-1 (aka DPL23) (SEQ ID NO: 6)
 QSVLTQPPSVSPGQTASITCS**GDKLGD**KYACWYQQKPGQSPVLVIY**QDSKRPS**GIPERFSGNSGNTATLTISGTQAMDEADYYCQAA**WDSS**TA

IGLV3-19 (SEQ ID NO: 27)
 SSELTDPAVSVALGQTVRITCQ**GDSLRSY**YASWYQQKPGQAPVLVIY**GKNNRPS**GIPDRFSGSSSGNTASLTITGAQAEDEADYYCNS**RDSS**GNHL

IGLV3-21 (SEQ ID NO: 9)
 QSVLTQPPSVSVAPGQTARITCG**GNNIGSKS**VHWYQQKPGQAPVLVY**DDSDRPS**GIPERFSGNSGNTATLTISRVEAGDEADYYCQV**WDSSSD**HP

IGLV6-57 (SEQ ID NO: 12)
 NFMLTQPHSVSESPGKTVTISCT**GSSGSIASNY**VQWYQQRPGSAPTTVIY**EDNQRPS**GVDPDRFSGSIDSSNSASLTISGLKTEDEADYYCQSY**YDSSN**

IGHV3-23 (aka DP47) (SEQ ID NO: 3)
 EVQLLESGGGLVQPGGSLRLSCAAS**GFTFSSY**AMSWVRQAPGKGLEWVSAI**SGSGG**STYYADSVKGRFTISRDNKNTLYQMNSLRRAEDTAVYYCAK

Figure 7

IGLV3-1::IGHV3-23 scaffold with variable CDR3 regions (SEQ ID NO: 84)

ATG GGA GAC GGT CAG TCT GTG CTG ACT CAG CCA CCC
 TCAGTGTCCGTGTCCCCAGGACAGACAGCCAGCATCACCTGCTCTGGAGAT
 AAATTGGGGGATAAATATGCTTGCTGGTATCAGCAGAAGCCAGGCCAGTCC
 CCTGTGCTGGTCATCTATCAAGATAGCAAGCGGCCCTCAGGGATCCCTGAG
 CGATTCTCTGGCTCCAACCTCTGGGAACACAGCCACTCTGACCATCAGCGGG
 ACCCAGGCTATGGATGAGGCTGACTATTACTGTCAGGCGTGGGAC
NNNNNNNTGGAGGTNNNNNNNT
 ACTGTGGTGTTTCGGCACGGGCACCAAGCTCATCATTTTCGTCT
CAGACCGGTGGTTCTGGTGGTGGTGGTTCTGGCGGCGGGCGGCTCCGGTGGT
GGTGGATCC
 GAAGTCCAACCTGCTGGAGTCCGGCGGTGGCCTGGTGCAGCCAGGTGGCAGC
 CTGCGCCTGAGCTGCGCCGCATCCGGTTTTACTTTTCAGCAGCTACGCGATGT
 CGTGGGTGCGCCAGGCACCGGGCAAGGGCCTGGAGTGGGTGAGCGCCATC
 AGCGGTAGCGGCGGTTCTACGTATTATGCGGACAGCGTCAAGGGCCGTTTC
 ACCATCAGCCGTGACAATTCCAAAAACACCCTGTACTTGCAGATGAACAGC
 TTGCGTGCGGAAGATACGGCTGTTTACTACTGTGCGAAA
NNNNNNNTGGANNNNNNNT
 GCCTTTGATATTTGGGGTCAAGGTACCATGGTTACCGTGAGC AGC

Translation (SEQ ID NO: 85):

MGDGQSVLTQPPSVSVSPGQTASITCSGDKLGDKYACWYQQKPGQSPVLVIYQDSKRPSG
 IPERFSGSNSGNTATLTISGTQAMDEADYYCQAWD NNNGGNNN TVVFGTGTRKTVSS *QTGGSGGGG*
SGGGSGGGGS EVQLLESGLVQPGGSLRLSCAASGFTFSSYAMSWVRQAPGKLEWVS
 AISGSGGSTYYADSVKGRFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK NNNGNNN
 AFDIWGQGTMTVTVSS

Figure 8

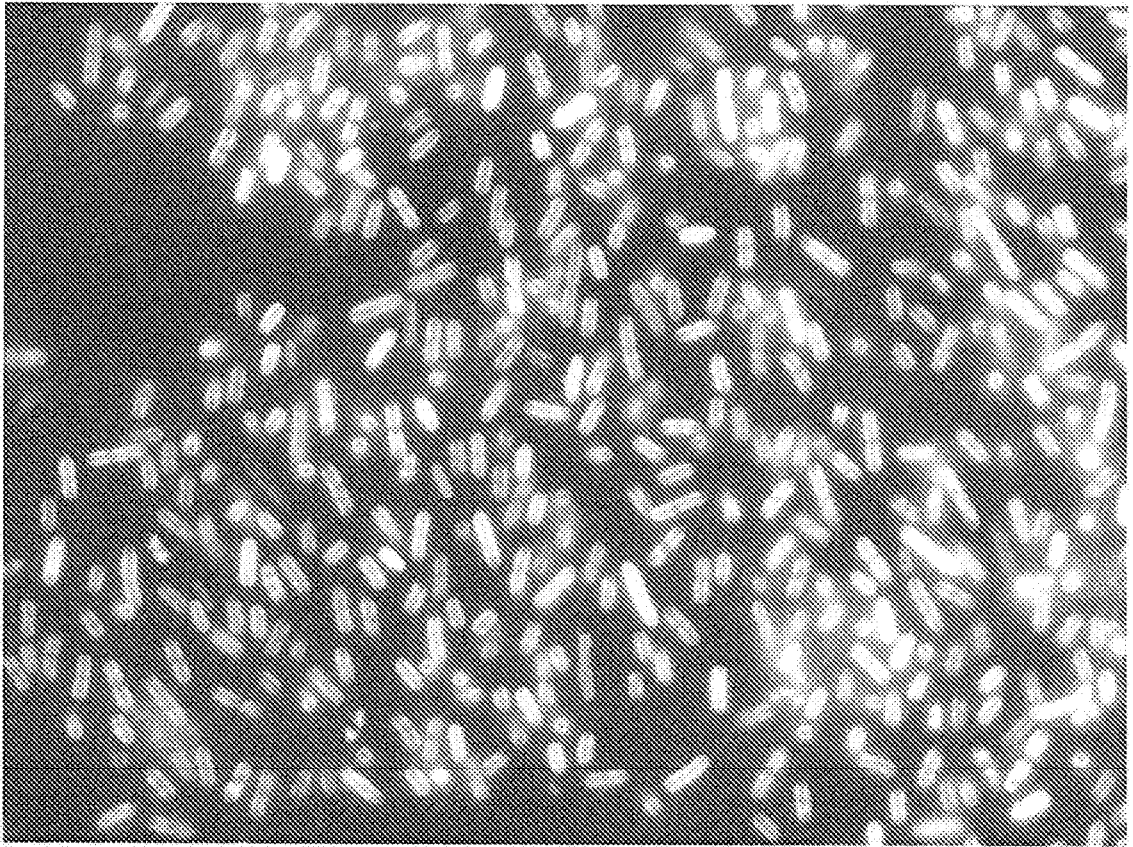
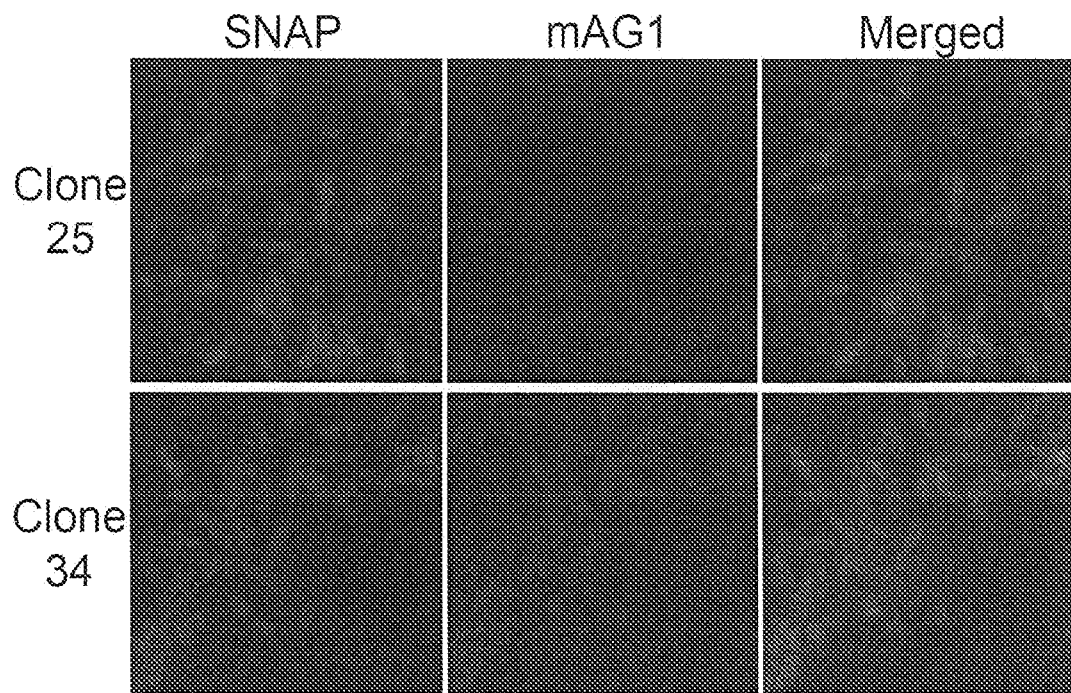


Figure 9

**Figure 10**

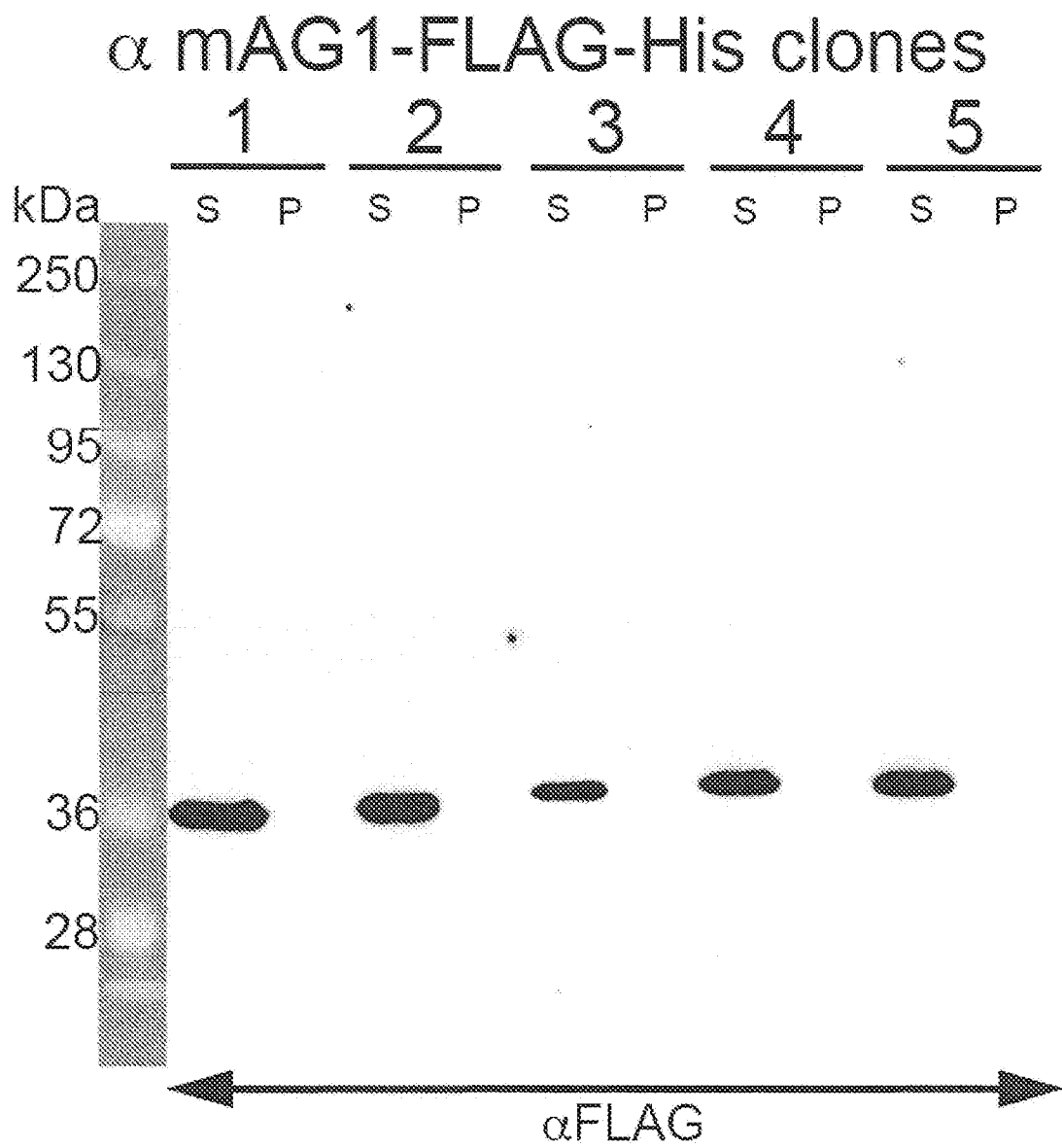
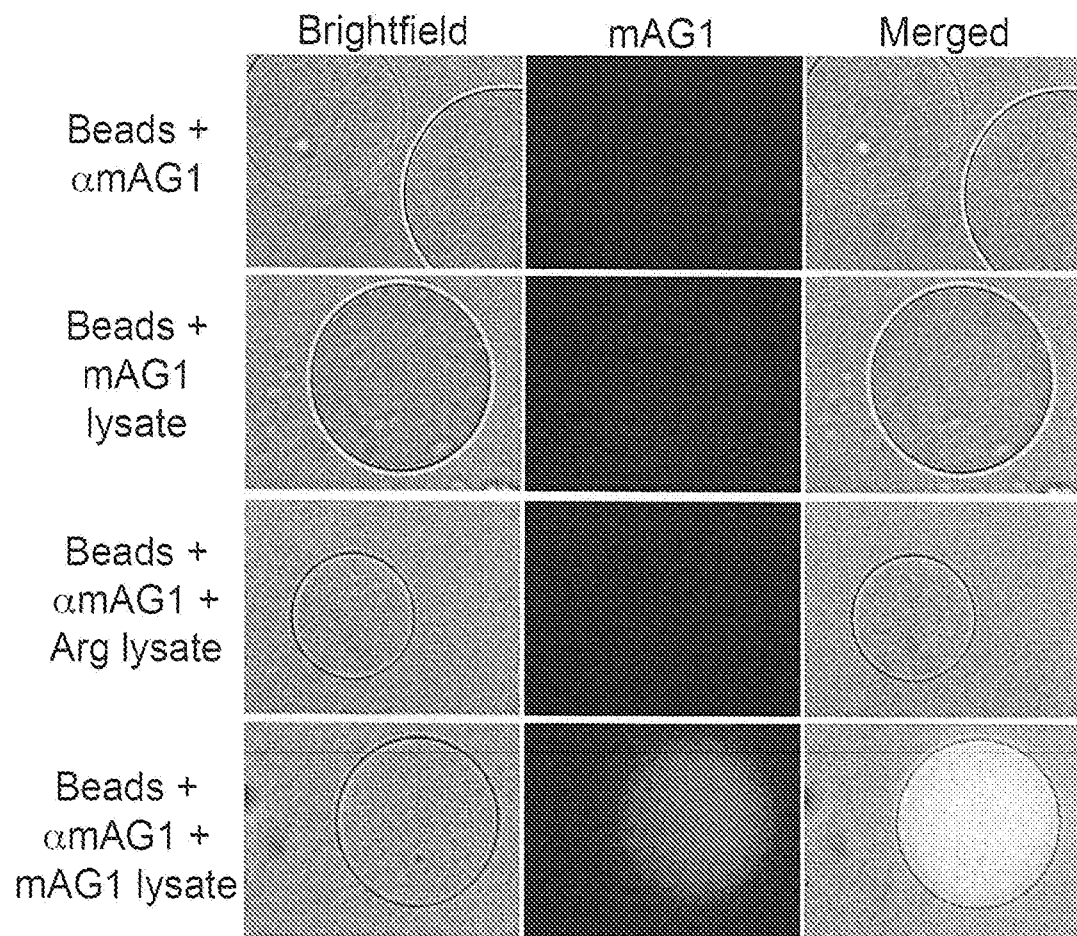
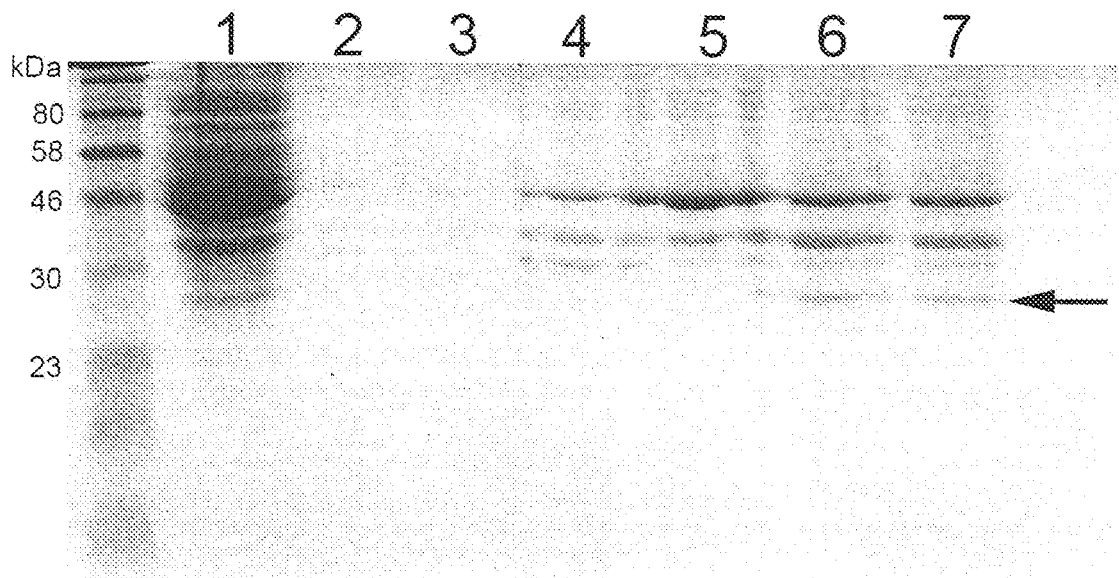


Figure 11

**Figure 12**

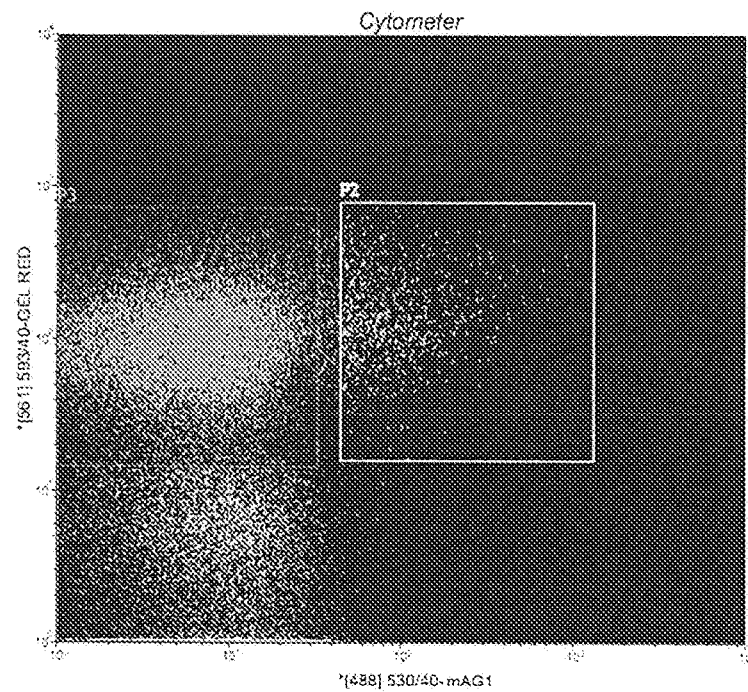
α mAG1 pull down experiment



- 1 - Clean mAG1 whole cell lysate
- 2 - Beads + "dirty" mAG1
- 3 - Beads + GFP
- 4 - Beads + α mAG1
- 5 - Beads + α mAG1 + Arg whole lysate
- 6 - Beads + α mAG1 (C1) + mAG1
- 7 - Beads + α mAG1 (C4) + mAG1

Figure 13

mAG1 lambdoid display - FACs



FACs sorted Cells

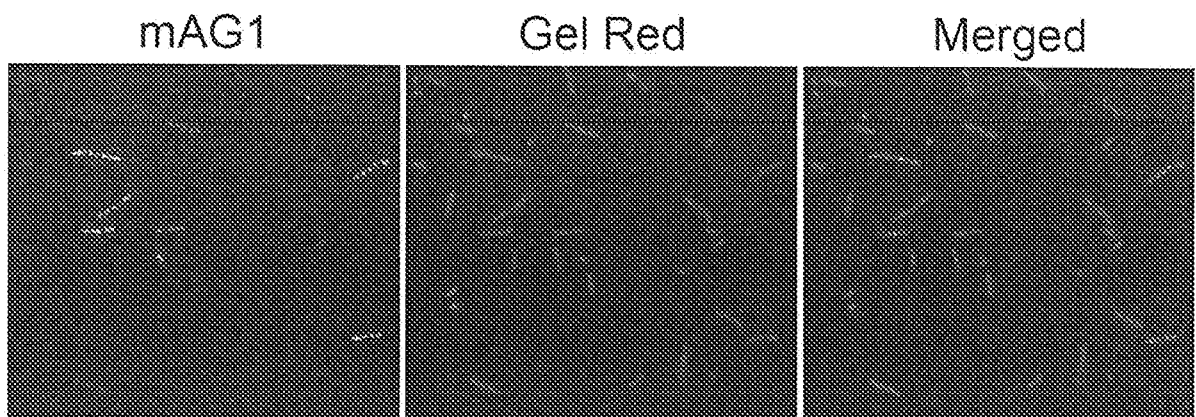


Figure 14