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FIG. 1

- A19's binding to various ovarian cancer cell lines

CLONE	Class	F				IP				IM				IV			
		CaOV3	OVCAR3	OVCAR8	OV98	IGROV-1	OV17R	OVCAR32	OVCAR33	CH1	HEY	HEY C2	SKOV3	A2780	HEY A8	OVCAR19	TDV1120
A19	IgG1	2	4	4	0	1	0	1	0	0	2	0	4	1	1	0	0

- A19's binding to various breast cancer cell lines

CLONE	Class	Cell Lines						
		MCF7	T47D	CAMA1	MDA-MB-231	HS578T	hME1	MCF10A
A19	IgG1	3	4	4	3	2	0	0

- A19's binding to various colorectal cancer cell lines

CLONE	Class	Cell Lines														
		COLO205	SW620	HT29	HCT116	LS174T	HCT15	KM12	HCC2098	RKO	DLD1	LOVO	SW480	SKCO1	SW1116	CRL154
A19	IgG1	4	0	3	2	1	3	0	1	3	4	3	0	1	0	2

- A19's binding to NPC

CLONE	Class	Cell Lines
		C666-1
A19	IgG1	3

Binding Via FACS

- 4 Binding > 80%
 3 60% < Binding < 80%
 2 40% < Binding < 60%
 1 20% < Binding < 40%
 0 Binding < 20%

FIG. 2

A

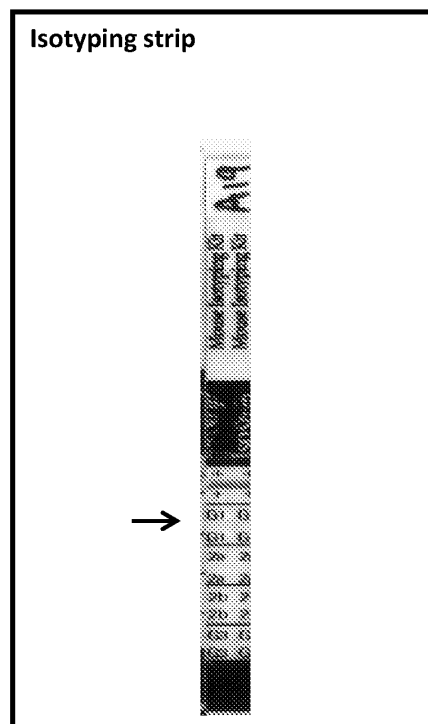
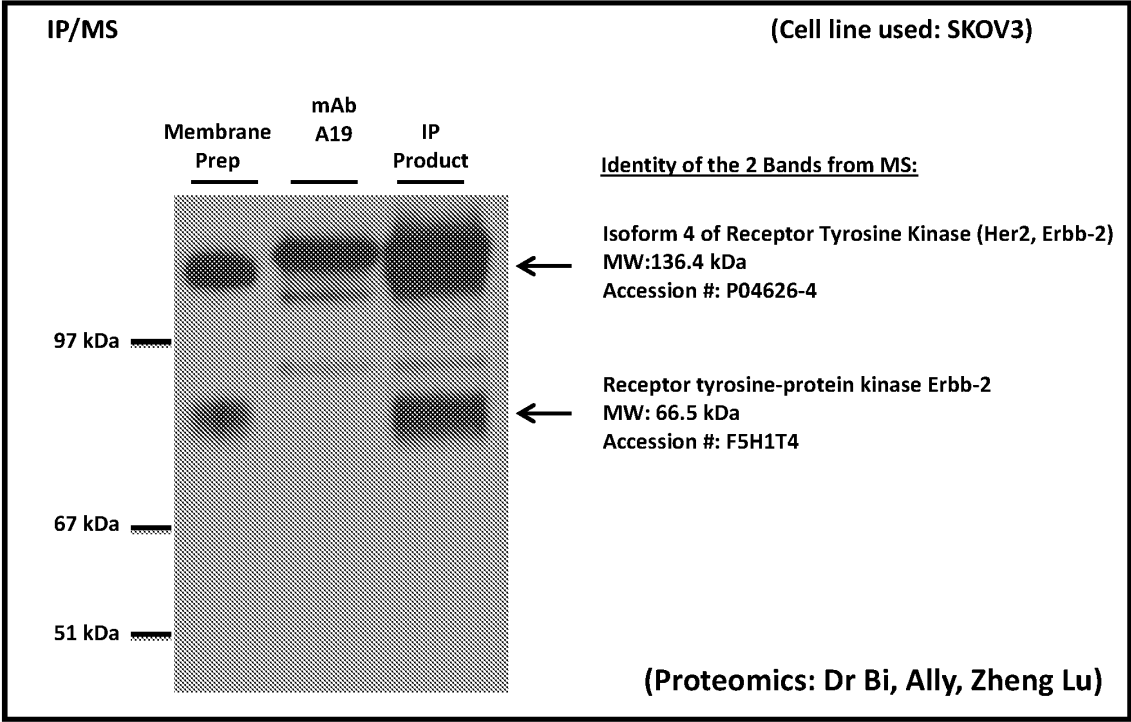


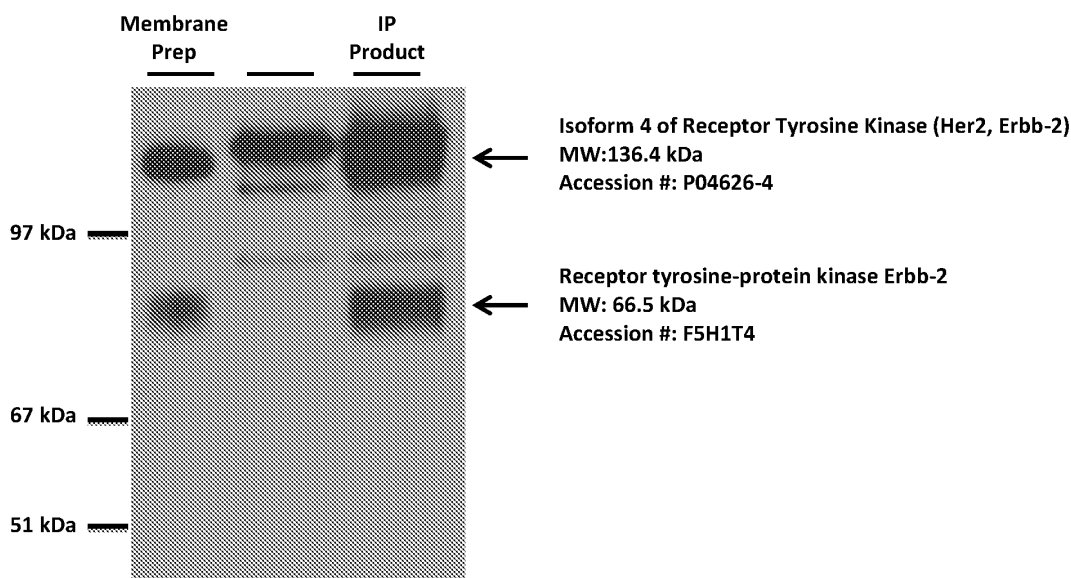
FIG. 2

B



MPRGSWKQPVCTGDTMKLR[REDACTED]HLYQGCQVQGNLELTYLPTNASLSFLQDIQEVQGYVLIAHNQ
VRQVPLQRLRIVRGTFQDLFEDNYALAVLDNGDPLNNTTEVTGASPGGLRELQLR[REDACTED]GGVLIQR[REDACTED]
[REDACTED]DIFHKNNQALTLTIDNRSRACHFCSPMCKGSR[REDACTED]TVCAGGCARCK[REDACTED]
[REDACTED]HSDCLACLHFNHSGICELHCPALVYNTNTDTFESMPNPEGR[REDACTED]
[REDACTED]CEKCSKPCAR[REDACTED]GL[REDACTED]EVR[REDACTED]KIFGSLAFLPESFDGDPASNTA
PLQPEQLQVFETLEEITGYLYISAWPDSLPLDSVFQNLQVIRGR[REDACTED]SLRELGSGL
ALIHNNHLCFVHTVPWDQLFR[REDACTED]GHCWGPBPTQCVNCSQFLR[REDACTED]
[REDACTED]VLQGLPREYVNRHCLPCHPECPQNGSVTCFGPEADQCVACAHYKDPFFCVAR[REDACTED]
FPDEEGACQPCPINCHSCVDLDDKGCPAEQRASPLTSIISAVVGILLVVVLGVVFGILIKRQDQKIRKYTMRR
[REDACTED]ILKETELRKVK[REDACTED]GIWIPDGENVKIPVAIKVIRENTSPKANK
[REDACTED]LLGICLTSTVQLVTLMPYGCLLDHVRENRR[REDACTED]
LVHRDLAARNVLVKSBNHVK[REDACTED]VPIK[REDACTED]RRFTHQSDVWSYGVTVWEL
MTFGAKPYDGIFAPEIPDLENGER[REDACTED]MARDPQRFVVL
[REDACTED]YSEDPTVPLPSETDGYVAPLTCSPQPEYV
[REDACTED]NQPDRVQPFPSPREGPLEAARPAATLERPKTILSPGKNGVVKDVFAFGGAVENPEYLTQGGAAQPHPPPAFSP
AFDNLYYWDQDFPERGAPPSTFEKGTPTAENPEYLGLDVPV

a.a. length = 1240
(n=5, 38.5% coverage)



MKLFA[REDACTED]HLTYGQCQVYVQGNLEITFLPTNASLSFLQDIEVQGVYLIAHNQVQVPLQLRLRIVRGTO
 LFDENYALAVLNDGDFPLNNTTTPVTGASPGGLPELQLRSLTEILKGGVLIQPNPQLCYQDTILWKDIFHKHNQALIT
 LIDTNRSPRACHPCSPMGKGSF[REDACTED]TVAGGCARCK[REDACTED]HSDCLACLHF
 NMSGICELHCFALVYNTDFTFESMNEDEGRYTGASCVTACFNYLSTDVGSCTLVCPLHNQVTAEDGTQRCCK
 SKPCARVCYGLGMEHLREVP[REDACTED]KIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEBITGYL
 YISAWFDSLPLDSLVFQNLQVIRGRIHLNGAYSILHQLGGLISWGLRLSIRELGSGLALIHHTLHCFVHTVPWDQLF
 RHFEQALHTTANRPDEBCVGBGLACHQYARGHCWGPGPTQCVNCSQFLP[REDACTED]VLQGLPREYVNRHCLF
 CNPFCOPNPGVTCFPGPEADOCVACHAYKDPFFCVAR[REDACTED]FPDEGGACQPCINCHTS

(SEQ ID NO: 12)

(n=3, 14.3% coverage)

Fig. 4

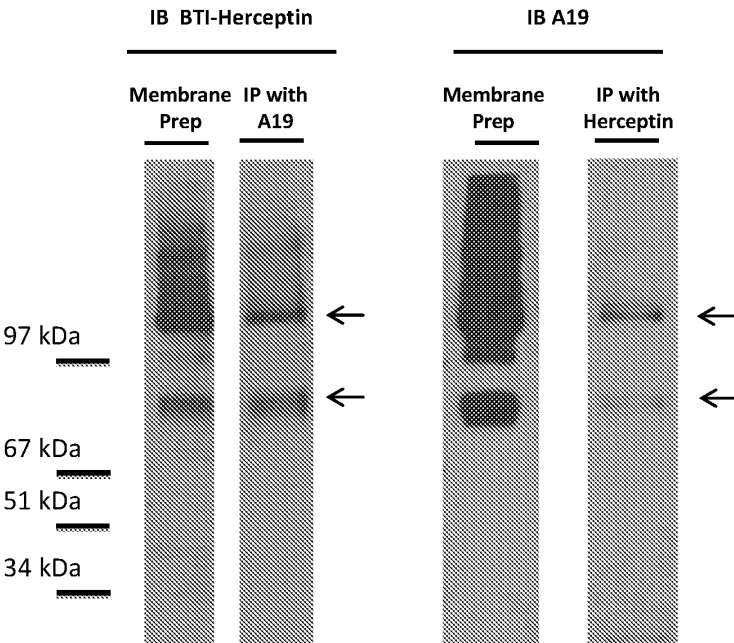
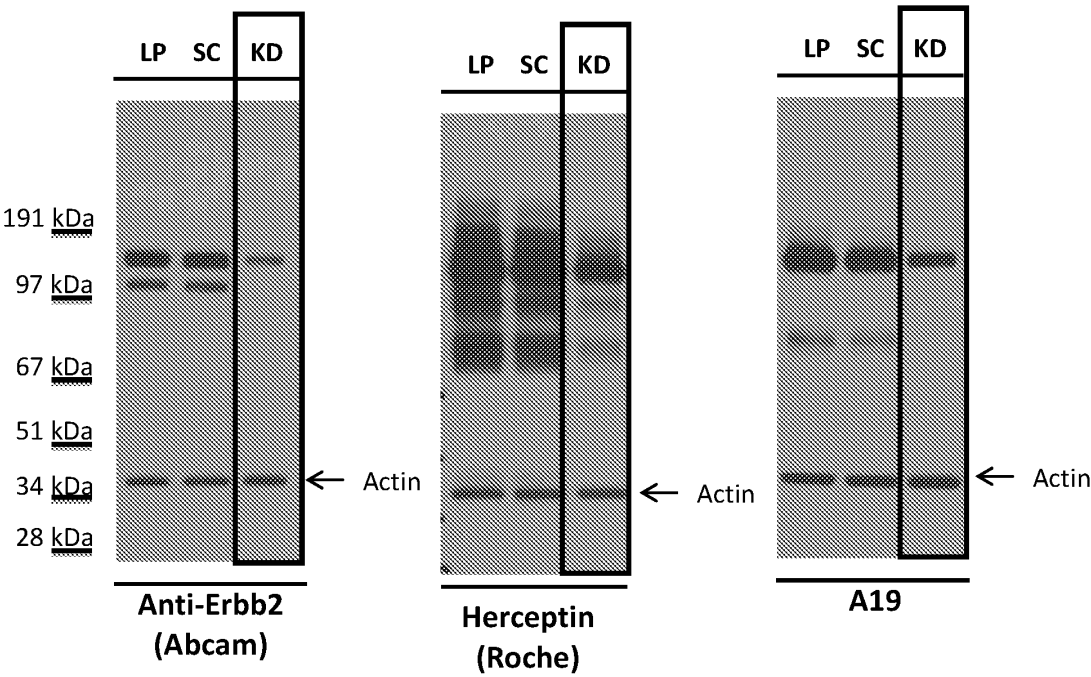


Fig. 5



Legend

LP: Lipofectamine

SC: Scramble

KD: Knocked Down

FIG. 6

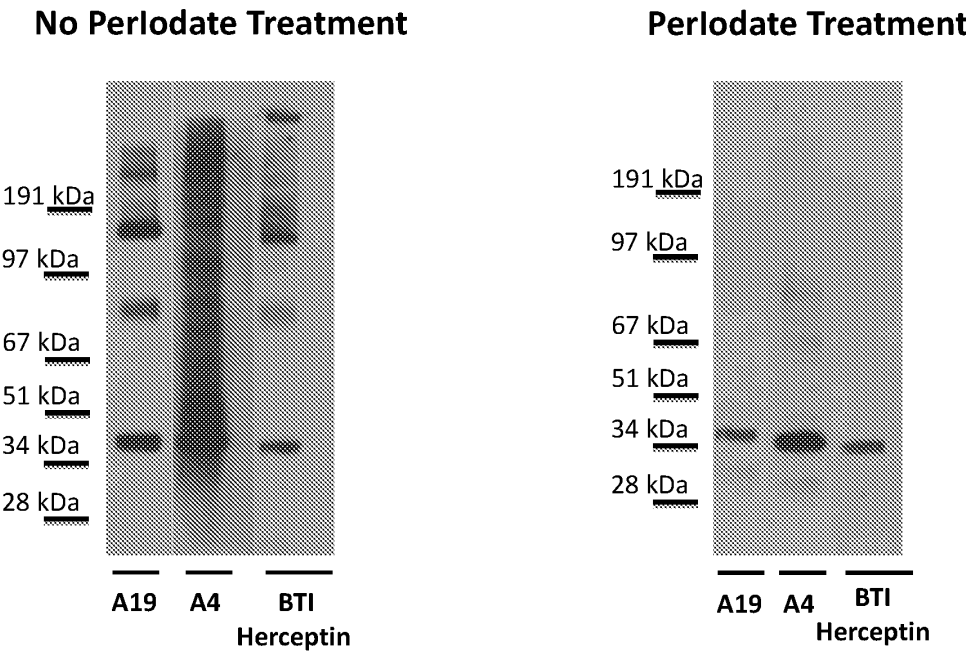
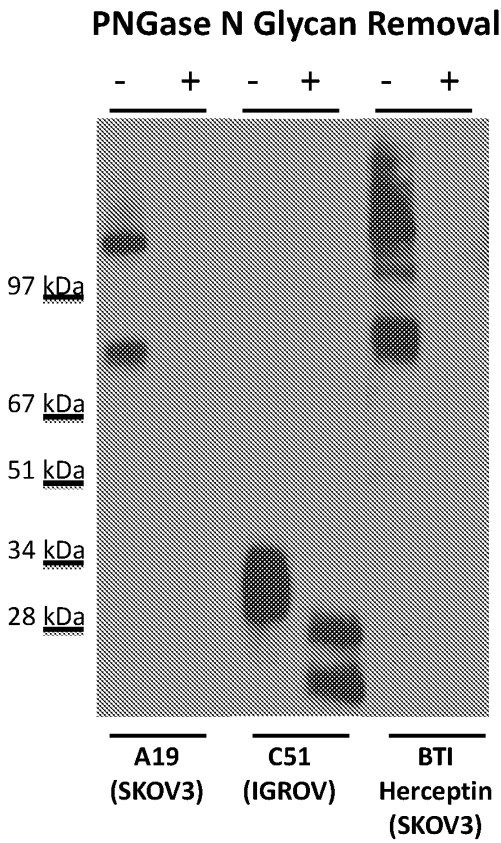


FIG. 7



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Fig. 8

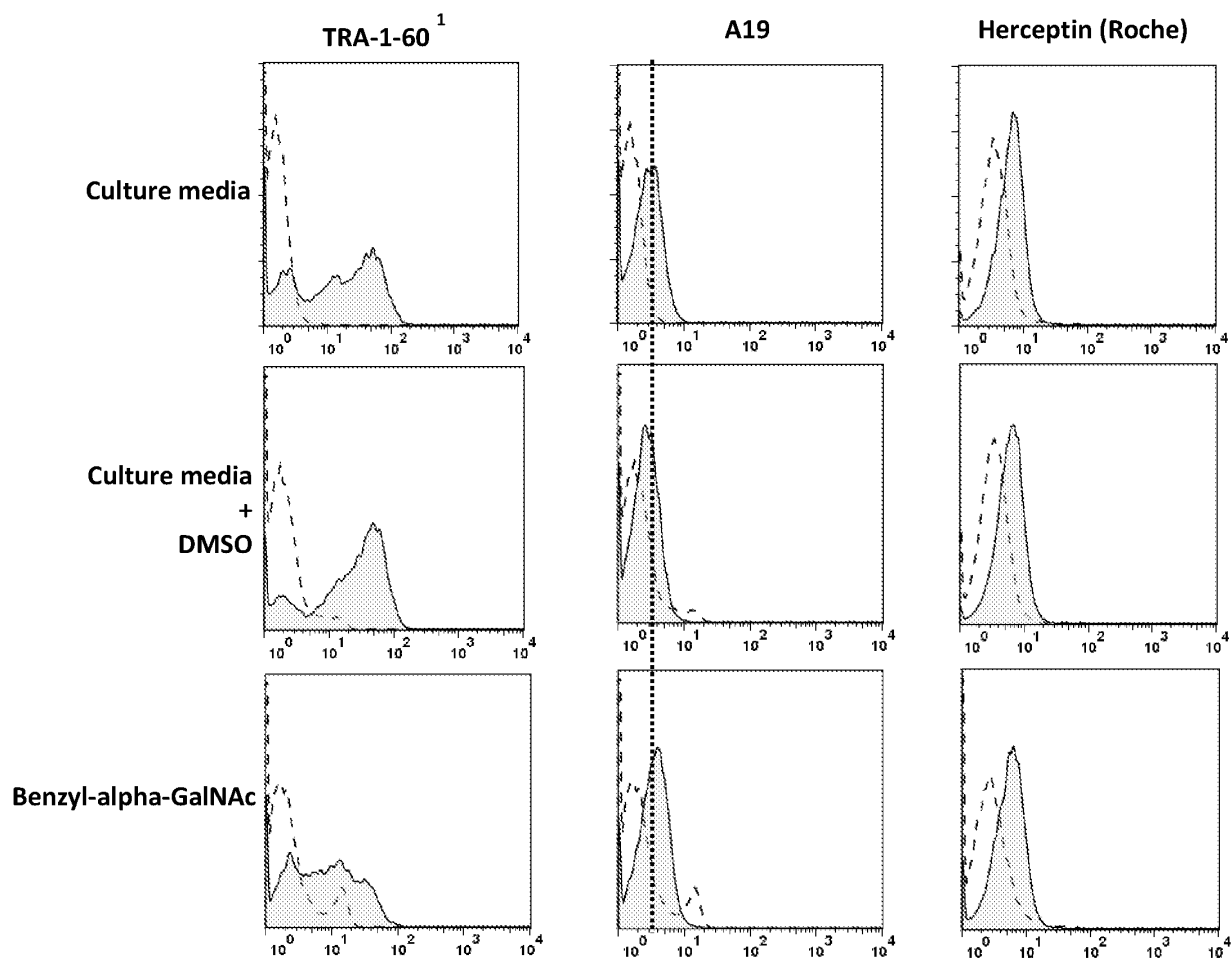
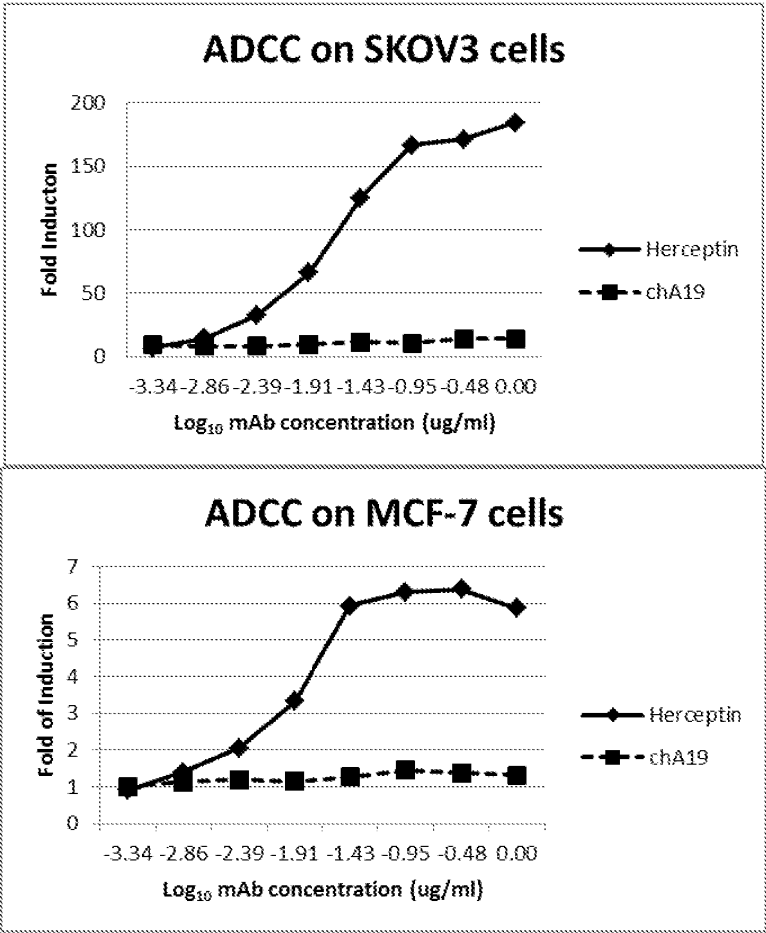
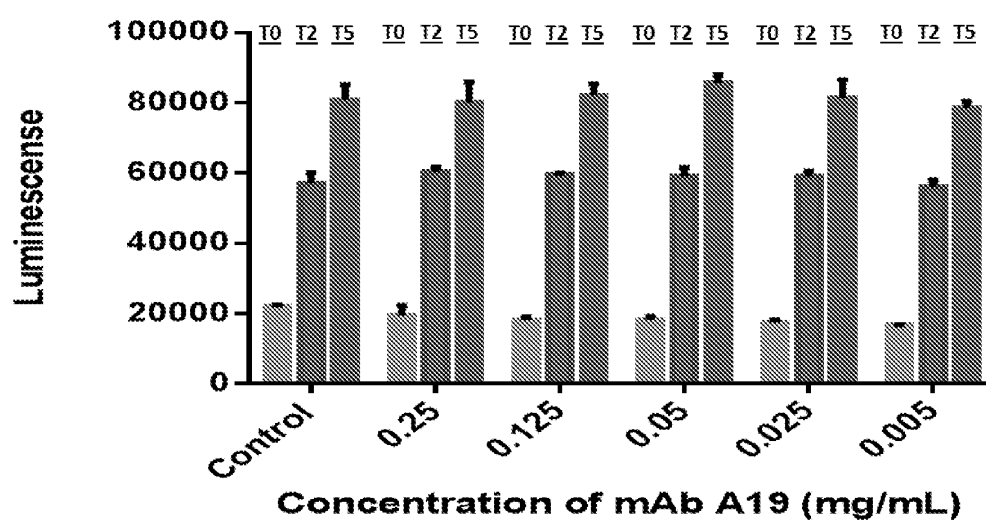


Fig. 9



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Fig. 10



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Fig. 11

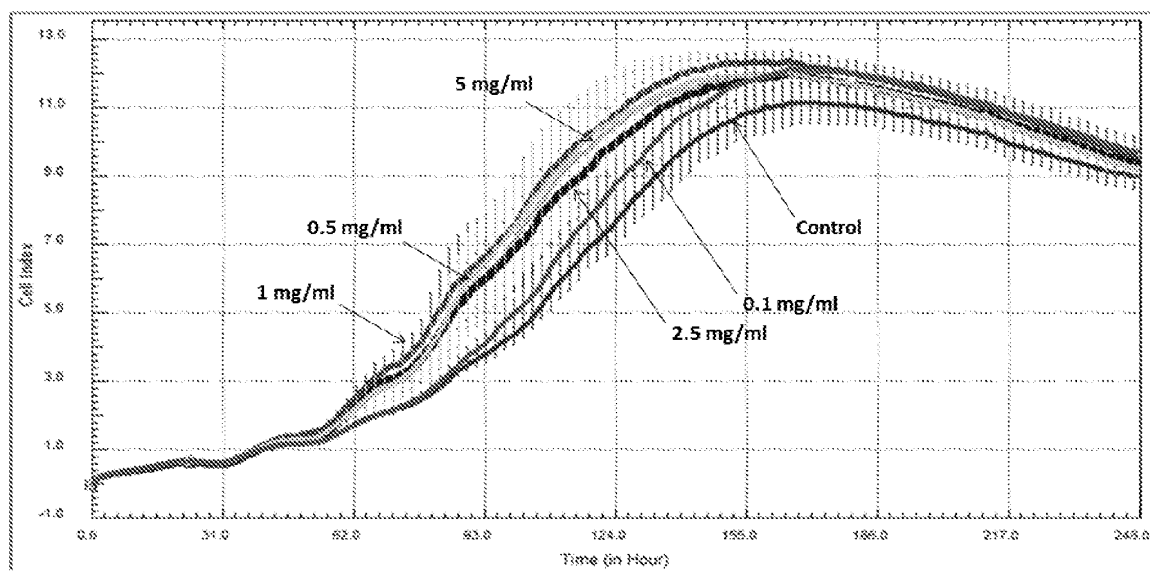


Fig. 12

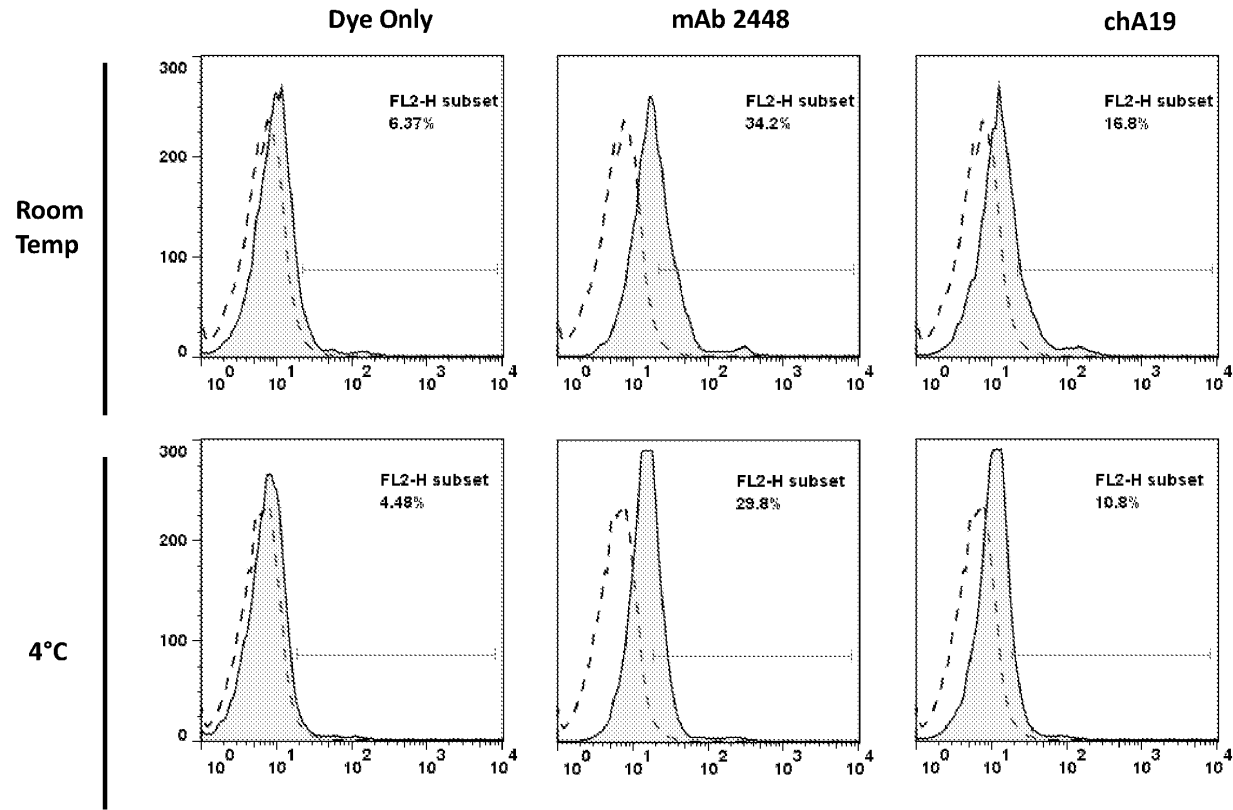
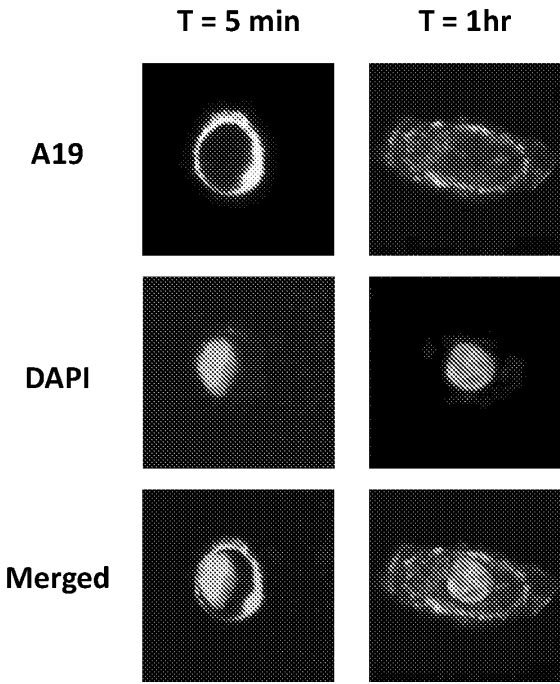


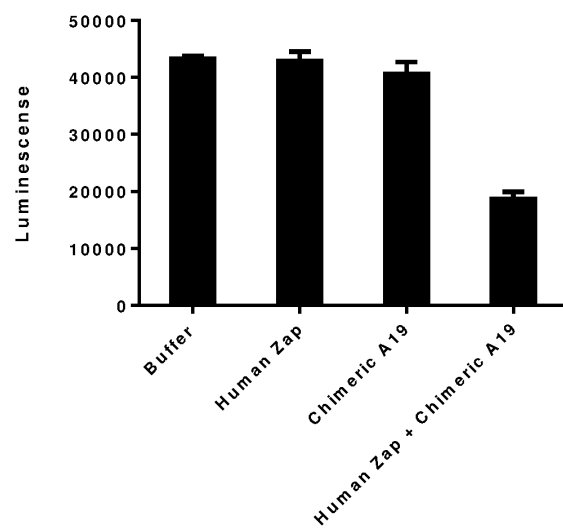
Fig. 13



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Fig. 14

Human Zap assay with Chimeric A19



Strep Zap Assay with B-Chimeric A19

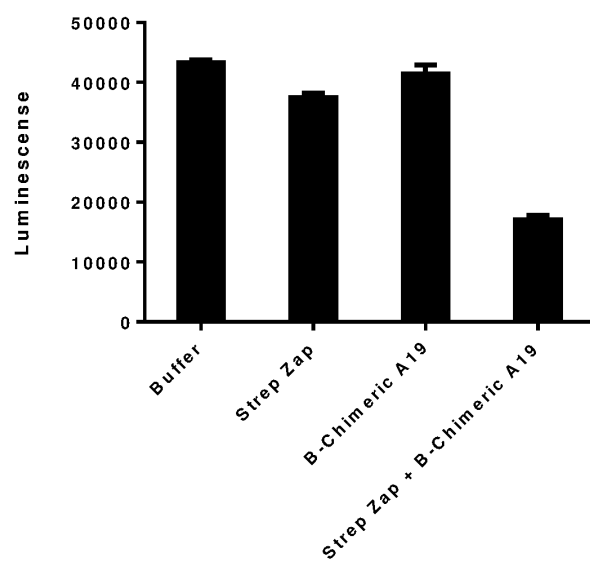
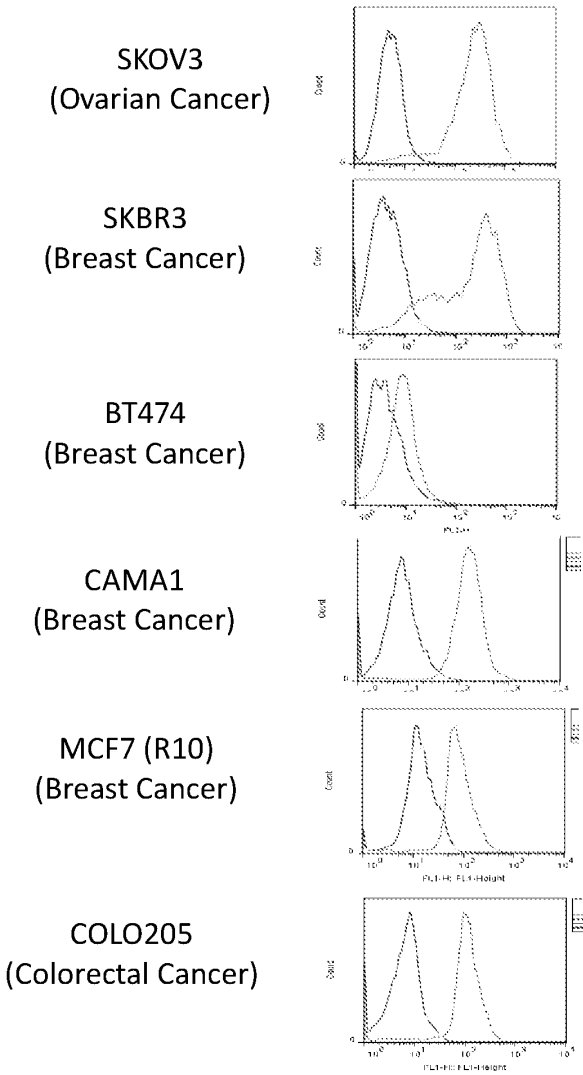


Fig. 15

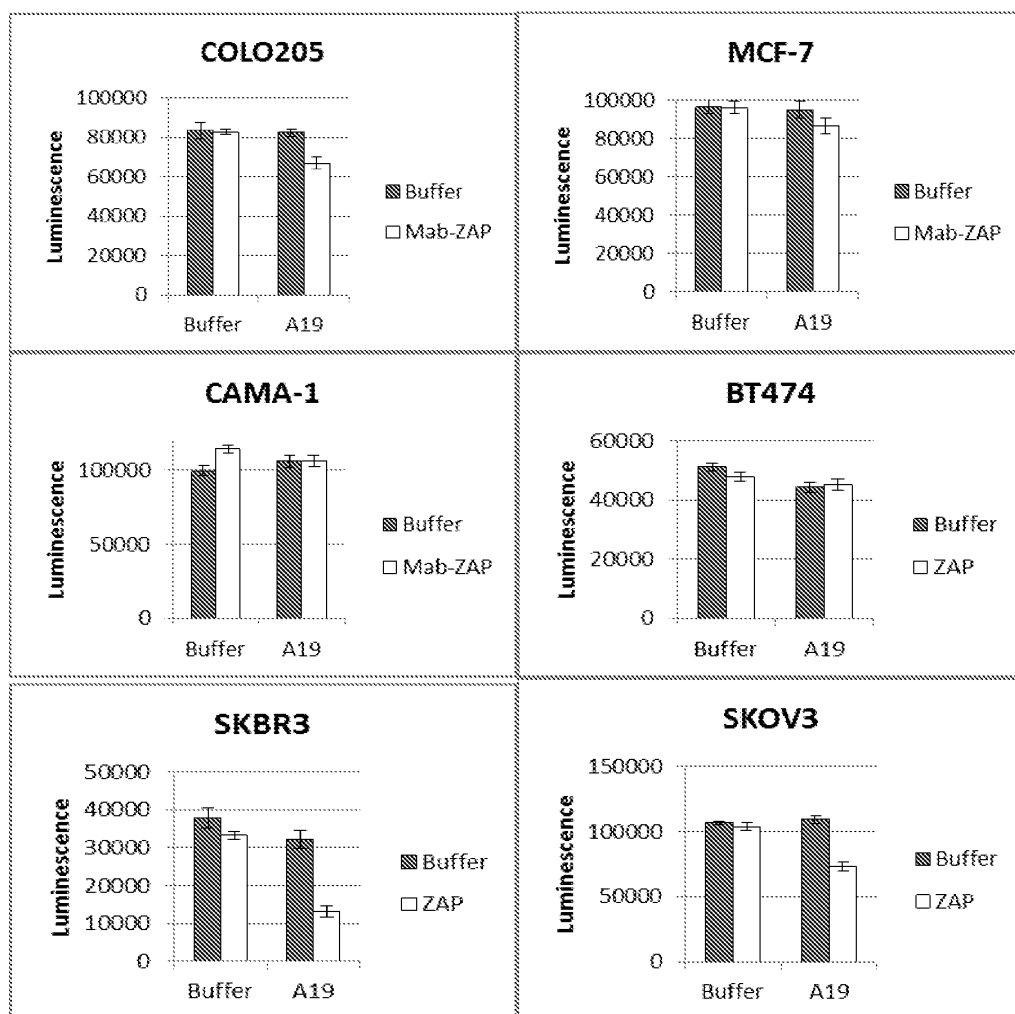
mA19 binding to various cancers



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Fig. 15

(cont'd)



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Fig. 16

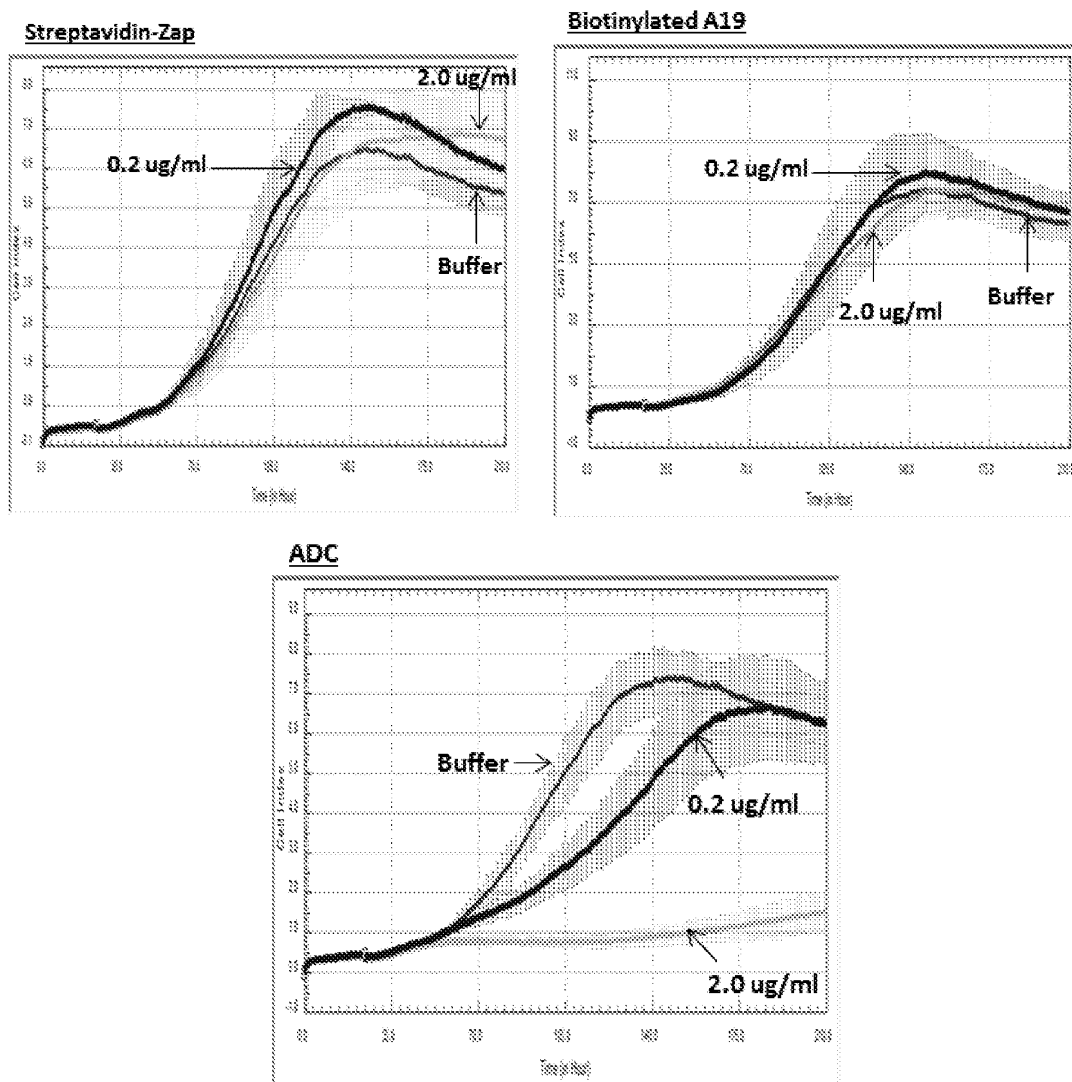
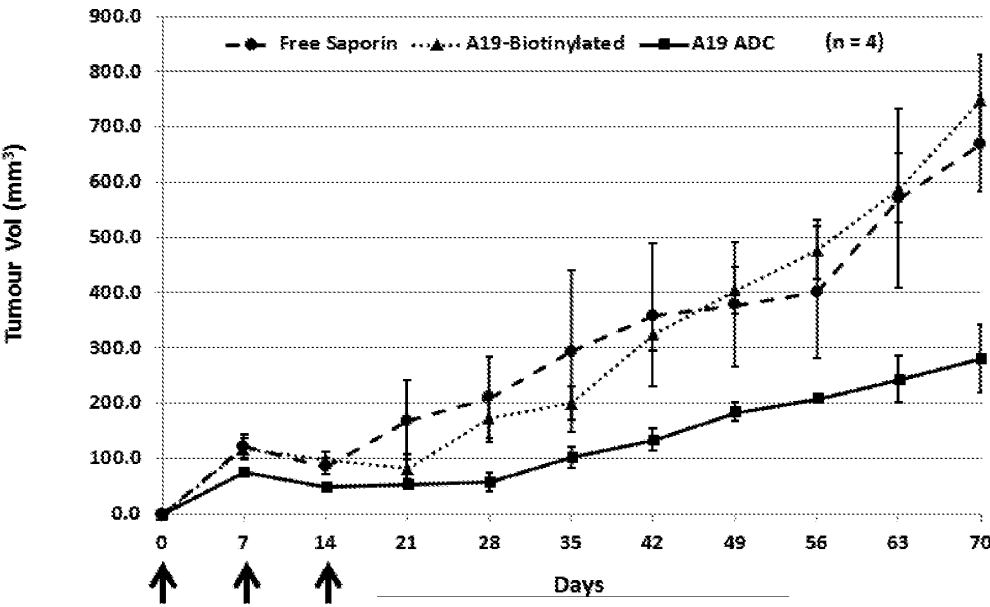


Fig. 17



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Fig. 18

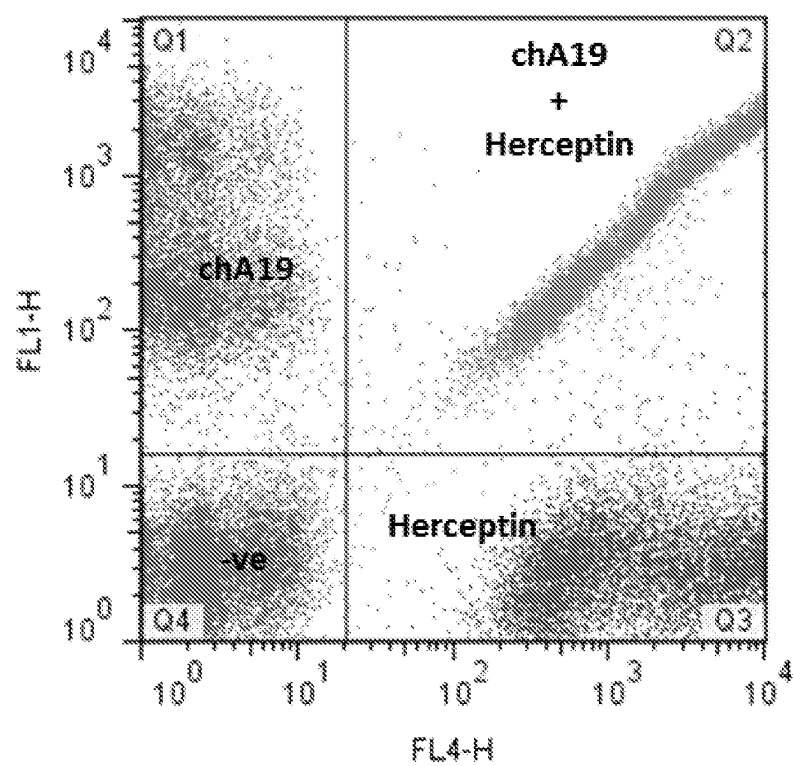
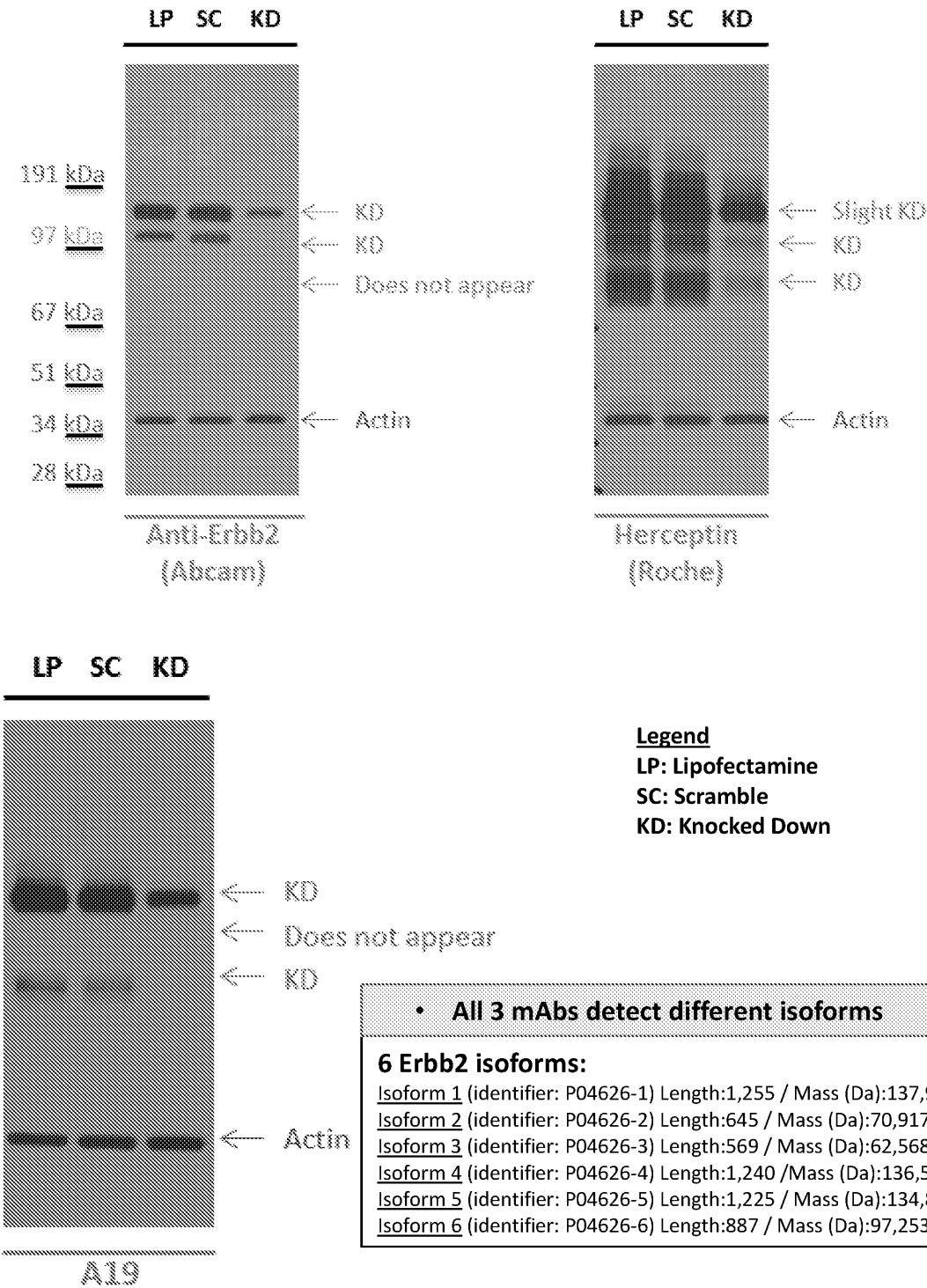


Fig. 19



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Fig. 20**Variable Gene Sequence**A19 Heavy Chain

Gene Sequence (SEQ ID NO: 9)

CAGGTGAAGCTGCAGGAGTCTGGAGCTGAGCTGATGAAGCCTGGGGCCTCAGTGAAGATATCCTG
CAAGGCTACTGGCTACACATTCAGTAACTACTGGATAGAGTGGGTAAAGCAGAGGCCTGGACATGG
CCTTGAGTGGATTGGAGAGATTTTACCTGGAAGTGATAGTACTAACTACAATGAGAAGTTCAAGGG
CAAGGCCACATTCACTGCAGATACATCCTCCAACACAGCCTACATGCAACTCAGCAGCCTGACATCT
GAGGACTCTGCCGTCTATTACTGTGCAAGAGGAGGGTCTGAAGTACGGGTACTACTTTGACTACTGG
GGCCAAGGGACACGGTCACCGTCTCCTCA

A19 Light Chain

Gene Sequence (SEQ ID NO: 10)

GACATTCTGATGACCCAGTCTCACAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCATCCC
CTGCAAGGCCAGTCAGGATGTGGGTACTGCTGTAGCCTGGTATCAACAAAAACCAGGGCAATCTC
CTAACTACTGATTTACTGGGCATCCACCCGGCACACTGGAGTCCCTGATCGCTTCACAGGCAGT
GGATCTGGGACAGATTTCACTCTCTCATTAGCAATGTGCAGTCTGAAGACTTGGCAGATTATTTCT
TGTCAGCAATATAGCAGCTATCGGACGTTCTGGTGGAGGCACCAAGCTGGAAATCAAACGG

Protein SequenceA19 Heavy Chain

Protein Sequence (SEQ ID NO: 1)

QVKLQESGAELMKPGASVKISCKATGYTFSNYWIEWVKQRPGHGLEWIGEILPGSDSTNYNEKF
KGKATFTADTSSNTAYMQLSSLTSEDSAVYYCARGGSNYGYFFDYWGQGTTTVTVSS

A19 Light Chain

Protein Sequence (SEQ ID NO: 2)

DILMTQSHKFMSTSVGDRVSIPCKASQDVGTAVAWYQQKPGQSPKLLIYWASTRHTGVPDRFTGSGSG
TDFTLSISNVQSEDLADYFCQQYSSYRTFGGGTKLEIKR