STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (HI-231)	ZENOCUTUZUMAB
PRONUNCIATION	zen" oh kue tooz' ue mab
THERAPEUTIC CLAIM	Treatment of cancer

CHEMICAL NAMES

1. Immunoglobulin G1, bispecific, anti-(human epidermal growth factor receptors, HER2 and HER3) (humanized clone MCLA-128 γ1-chain), disulfide with humanized clone MCLA-128 light chain, dimer (Source : CAS)

2. Immunoglobulin G1-kappa, anti-(*Homo sapiens* Receptor tyrosine-protein kinase erbB-3 (Proto-oncogene-like protein c-ErbB-3, Tyrosine kinase-type cell surface receptor HER3, EC=2.7.10.1)) and anti-(*Homo sapiens* Receptor tyrosine-protein kinase erbB-2 (Metastatic lymph node gene 19 protein, Tyrosine kinase-type cell surface receptor HER2, CD340 antigen)); humanized monoclonal antibody, bispecific; γ1 heavy chain anti-ERBB3 (1-453) [*Homo sapiens* VH (IGHV1-2*02 –(IGHD)-IGHJ4*01 [8.8.17] (1-124) -*Homo sapiens* IGHG1*03 {CH3[L^{11}>K(358),T^{26}>K(373),K^{107}>del(454)]} (125-453)] (227-214')-disulfide with κ light chain (1'-214') [*Homo sapiens* V-KAPPA (IGKV1-39*01 –IGKJ1*01)[6.3.9] (1'-107') -*Homo sapiens* IGKC*01 (108'-214')]; (233-230":236-233")-bisdisulfide with γ1 heavy chain anti-ERBB2 (1"-450") [humanized VH (*Homo sapiens* IGHV1-46*01 (84%) –(IGHD)-IGHJ4*01 [8.8.14] (1"-121") -*Homo sapiens* IGHG1*03 {CH3[L^{11}>D(355"),L^{24}>E(372"),K^{107}>del(451")]} (122"-450")] (224"-214'")-disulfide with κ light chain (1'"-214'") [*Homo sapiens* V-KAPPA (IGKV1-39*01 –IGKJ1*01)[6.3.9] (1'"-107'") -*Homo sapiens* IGKC*01 (108'"-214'")]. (Source: USAN Program chemical consultant)

STRUCTURAL FORMULA

Heavy chain anti-ERBB3

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QVQLVQSGAE  VKKPGASVKV  SCKASGYTFT  GYYMHWVRQA  PGQGLEWMGW   50
INPNSGGTNY  AQKFQGRVTM  TRDTSISTAY  MELSRLRSDD  TAVYYCARDH  100
GSRHFWSYWG  FDYWGQGTLV  TVSSASTKGP  SVFPLAPSSK  STSGGTAALG  150
CLVKDYFPEP  VTVSWNSGAL  TSGVHTFPAV  LQSSGLYSLS  SVVTVPSSSL  200
GTQTYICNVN  HKPSNTKVDK  RVEPKSCDKT  HTCPPCPAPE  LLGGPSVFLF  250
PPKPKDTLMI  SRTPEVTCVV  VDVSHEDPEV  KFNWYVDGVE  VHNAKTKPRE  300
EQYNSTYRVV  SVLTVLHQDW  LNGKEYKCKV  SNKALPAPIE  KTISKAKGQP  350
REPQVYTKPP  SREEMTKNQV  SLKCLVKGFY  PSDIAVEWES  NGQPENNYKT  400
TPPVLDSDGS  FFLYSKLTVD  KSRWQQGNVF  SCSVMHEALH  NHYTQKSLSL  450
SPG                                                        453
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Light chain

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DIQMTQSPSS  LSASVGDRVT  ITCRASQSIS  SYLNWYQQKP  GKAPKLLIYA   50'
ASSLQSGVPS  RFSGSGSGTD  FTLTISSLQP  EDFATYYCQQ  SYSTPPTFGQ  100'
GTKVEIKRTV  AAPSVFIFPP  SDEQLKSGTA  SVVCLLNNFY  PREAKVQWKV  150'
DNALQSGNSQ  ESVTEQDSKD  STYSLSSTLT  LSKADYEKHK  VYACEVTHQG  200'
LSSPVTKSFN  RGEC                                           214'
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Heavy chain anti-ERBB2

QVQLVQSGAE	VKKPGASVKL	SCKASGYTFT	AYYINWVRQA	PGQGLEWIGR	50"
IYPGSGYTSY	AQKFQGRATL	TADESTSTAY	MELSSLRSED	TAVYFCARPP	100"
VYYDSAWFAY	WGQGTLVTVS	SASTKGPSVF	PLAPSSKSTS	GGTAALGCLV	150"
KDYFPEPVTV	SWNSGALTSG	VHTFPAVLQS	SGLYSLSSVV	TVPSSSLGTQ	200"
TYICNVNHKP	SNTKVDKRVE	PKSCDKTHTC	PPCPAPELLG	GPSVFLFPPK	250"
PKDTLMISRT	PEVTCVVVDV	SHEDPEVKFN	WYVDGVEVHN	AKTKPREEQY	300"
NSTYRVVSVL	TVLHQDWLNG	KEYKCKVSNK	ALPAPIEKTI	SKAKGQPREP	350"
QVYTDPPSRE	EMTKNQVSLT	CEVKGFYPSD	IAVEWESNGQ	PENNYKTTPP	400"
VLDSDGSFFL	YSKLTVDKSR	WQQGNVFSCS	VMHEALHNHY	TQKSLSLSPG	450"

Light chain

DIQMTQSPSS	LSASVGDRVT	ITCRASQSIS	SYLNWYQQKP	GKAPKLLIYA	50"'
ASSLQSGVPS	RFSGSGSGTD	FTLTISSLQP	EDFATYYCQQ	SYSTPPTFGQ	100"'
GTKVEIKRTV	AAPSVFIFPP	SDEQLKSGTA	SVVCLLNNFY	PREAKVQWKV	150"'
DNALQSGNSQ	ESVTEQDSKD	STYSLSSTLT	LSKADYEKHK	VYACEVTHQG	200"'
LSSPVTKSFN	RGEC				214"'

Disulfide bridges location

22-96	22"-96"	23'-88'	23"'-88"'	134'-194'	134"'-194"'	148"-204"	151-207
214'-227	214"'-224"	230"-233	233"-236	265"-325"	268-328	371"-429"	374-432

Glycosylation sites (N)

Asn-301" Asn-304

MOLECULAR FORMULA	$C_{6479}H_{9971}N_{1725}O_{2027}S_{45}$ (non-glycosylated)
MOLECULAR WEIGHT	145.90 kDa
TRADEMARK	None as yet
SPONSOR	Merus NV
CODE DESIGNATIONS	MCLA-128
CAS REGISTRY NUMBER	1969309-56-5
UNII	AE72RB1W1X
WHO NUMBER	10687

gbk