STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (LM-84)	ZINLIRVIMAB
PRONUNCIATION	zin leer' vi mab
THERAPEUTIC CLAIM	Treatment of HIV infection

CHEMICAL NAMES

Immunoglobulin G1 [443-leucine,449-serine], anti-(human immunodeficiency virus 1 envelope protein gp120env) (human monoclonal 2G2-55D10 γ1-chain), disulfide with human monoclonal 2G2-55D10 λ-chain, dimer (CA INDEX NAME)

immunoglobulin G1-lambda2, anti-[human immunodeficiency virus type 1 (HIV-1) gp120 envelope glycoprotein N-glycan V3 region], *Homo sapiens* monoclonal antibody; gamma1 heavy chain *Homo sapiens* (1-461) [VH (*Homo sapiens* IGHV4-4*08 (79.2%) -(IGHD) - IGHJ6*04 (85.0%), CDR-IMGT [8.7.26] (26-33.51-57.96-121)) (1-132) -*Homo sapiens* IGHG1*01, G1m17,1, G1v24 CH3 L107, S114 (CH1 K120 (229) (133-230), hinge 1-15 (231-245), CH2 (246-355), CH3 D12 (371), L14 (373), M107>L(443), N114>S (449) (356-460), CHS K2>del (461)) (133-461)], (235-213')-disulfide with lambda2 light chain *Homo sapiens* (1'-214') [V-LAMBDA (*Homo sapiens* IGLV3-21*01 (64.9%) -IGLJ2*01 (80.0%) G121>A (102), K123>R (104), CDR-IMGT [6.3.12] (22-27.45-47.87-98)) (1'-108') -*Homo sapiens* IGLC2*01 (100%) (109'-214')]; dimer (241-241":244-244")-bisdisulfide, produced in Chinese hamster ovary (CHO) cells, cell line CHO-K1SV, glycoform alfa

STRUCTURAL FORMULA

Heavy chain (GS-2872 γ1 chain); X, X'')

QVQLQESGPG	LVKPSETLSV	TCSVSGDSMN	NYYWTWIRQS	PGKGLEWIGY	50
ISDRESATYN	PSLNSRVVIS	RDTSKNQLSL	KLNSVTPADT	AVYYCATARR	100
GQRIYGVVSF	GEFFYYYSMD	VWGKGTTVTV	SSASTKGPSV	FPLAPSSKST	150
SGGTAALGCL	VKDYFPEPVT	VSWNSGALTS	GVHTFPAVLQ	SSGLYSLSSV	200
VTVPSSSLGT	QTYICNVNHK	PSNTKVDKKV	EPKSCDKTHT	CPPCPAPELL	250
GGPSVFLFPP	KPKDTLMISR	TPEVTCVVVD	VSHEDPEVKF	NWYVDGVEVH	300
NAKTKPREEQ	YNSTYRVVSV	LTVLHQDWLN	GKEYKCKVSN	KALPAPIEKT	350
ISKAKGQPRE	PQVYTLPPSR	DELTKNQVSL	TCLVKGFYPS	DIAVEWESNG	400
QPENNYKTTP	PVLDSDGSFF	LYSKLTVDKS	RWQQGNVFSC	SVLHEALHSH	450
YTQKSLSLSP	G				461

Light chains (GS-2872 λ-chain); X', X''')

SYVRPLSVAL	GETARISCGR	QALGSRAVQW	YQHRPGQAPI	LLIYNNQDRP	50'
SGIPERFSGT	PDINFGTRAT	LTISGVEAGD	EADYYCHMWD	SRSGFSWSFG	100'
GATRLTVLGQ	PKAAPSVTLF	PPSSEELQAN	KATLVCLISD	FYPGAVTVAW	150'
KADSSPVKAG	VETTTPSKQS	NNKYAASSYL	SLTPEQWKSH	RSYSCQVTHE	200'
GSTVEKTVAP	TECS				214'

Disulfide bridges (denoted in red, bold text, total 16 bridges, shaded text indicates interchain)

22-95	159-215	276-336	382-440
22''-95''	159''-215''	276''-336''	382''-440''
18'-86'	136'-195'	18'''-86'''	136'''-195'''
241-241''	244-244''	235-213'	235''-213'''

Mutations (denoted as bold, double underlined)

M443>L	**M443''>L**	LS mutation to enhance pH-dependent FcRn binding and prolong circulating half-life versus original antibody 10-1074
N449>S	**N449'>S**	''
K462>del	**K462''>del**	Pre-translational removal of C-terminal lysine

Glycosylation sites

312	**312''**	Conserved Fc (Kabat N297) biantennary N-Glycans, primarily G0F/G1F

N-terminal Glutaminyl cyclization

1	**1''**	**predicted; post-translational**

IMGT Variable Regions are bold single underlined (sequence numbering, both heavy and both light chains)

CDRH1,CDRH2,CDRH3:	GDSMNNYY (26-33)	ISDRESA (51-57)	ATARRGQRIYGVVSFGEFFYYYSMDV (96-121)
CDRL1,CDRL2,CDRL3:	ALGSRA (22-27)	NNQ (45-47)	HMWDSRSGFSWS (87-98)

MOLECULAR FORMULA	$C_{6562}H_{10124}N_{1760}O_{2036}S_{40}$ (non-glycosylated)
MOLECULAR WEIGHT	147.53 kDa (non-glycosylated with no other post-translational modification other than disulfide bonds)
TRADEMARK	None as yet
SPONSOR	Gilead Sciences, Inc.
CODE DESIGNATIONS	GS-2872, 10-1074-LS
CAS REGISTRY NUMBER	2417213-75-1
UNII	L98LJF15I9
WHO NUMBER	11879

gbk