September 25, 2014

STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (BC-156)	LIFASTUZUMAB VEDOTIN
PRONUNCIATION	lye" fas tooz' ue mab ve doe' tin
THERAPEUTIC CLAIM	Treatment of cancer

CHEMICAL NAMES

1. Immunoglobulin G1, anti-(human phosphate-sodium cotransporter NaPi3b) (human-*Mus musculus* monoclonal DNIB0600A heavy chain), disulfide with human-*Mus musculus* monoclonal DNIB0600A light chain, dimer, tetrakis(thioether) with *N*-[[[4-[[*N*-[6-(3-mercapto-2,5-dioxo-1-pyrrolidinyl)-1-oxohexyl]-L-valyl-N^5-(aminocarbonyl)]-L-ornithyl]amino]phenyl]methoxy]carbonyl]-*N*-methyl]-L-valyl-*N*-[(1*S*,2*R*)-4-[(2*S*)-2-[(1*R*,2*R*)-3-[[(1*R*,2*S*)-2-hydroxy-1-methyl-2-phenylethyl]amino]-1-methoxy-2-methyl-3-oxopropyl]-1-pyrrolidinyl]-2-methoxy-1-[(1*S*)-1-methylpropyl]-4-oxobutyl]-*N*-methyl]-L-valinamide

2. Immunoglobulin G1-kappa, anti-(human Sodium-dependent phosphate transport protein 2B (NaPi3b, sodium/phosphate cotransporter 2B, NaPi-2b, solute carrier family 34 member 2)), humanized mouse monoclonal antibody linked through a protease-labile linker to monomethyl auristatin E, anti-mitotic agent: γ1 heavy chain (1-449) [humanized VH (human IGHV3-23*4 (86%) –(IGHD)-IGHJ5*01) [8.8.13] (1-120) –human IGHG1*03 [CH1 R^{97}>K(217),CH3 K^{107}del (450)] (121-449)] partly (223-219')-disulfide with kappa light chain (1'-219') [humanized V-KAPPA (human IGKV1-39*01 (78%) –IGKJ1*01) [11.3.9] (1'-112') –human IGKC*01 (113'-219')] partly dimer (229-229'':232-232'')-bisdisulfide (monoclonal antibody) in which an average of three to four cysteines are thioether bounded to (3*RS*)-1-[(8*S*,11*S*)-11-({4-[(5*S*,8*S*,11*S*,12*S*)-11-[(2*S*)-butan-2-yl]-14-{(2*S*)-2-[(1*R*,2*S*)-3-{[(1*R*,2*R*)-1-hydroxy-1-phenylpropan-2-yl]amino}-1-methoxy-2-methyl-3-oxopropyl]pyrrolidin-1-yl}-12-methoxy-4,10-dimethyl-3,6,9,14-tetraoxo-5,8-bis(propan-2-yl)-2,4,7,10-oxatriazatetradecyl]phenyl}carbamoyl)-6,9,16-trioxo-8-(propan-2-yl)-7,10,15,17-tetraazaheptadecyl]-2,5-dioxopyrrolidin-3-yl (vedotin).

STRUCTURAL FORMULA

Heavy chain

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EVQLVESGGG  LVQPGGSLRL  SCAASGFSFS  DFAMSWVRQA  PGKGLEWVAT   50
IGRVAFHTYY  PDSMKGRFTI  SRDNSKNTLY  LQMNSLRAED  TAVYYCARHR  100
GFDVGHFDFW  GQGTLVTVSS  ASTKGPSVFP  LAPSSKSTSG  GTAALGCLVK  150
DYFPEPVTVS  WNSGALTSGV  HTFPAVLQSS  GLYSLSSVVT  VPSSSLGTQT  200
YICNVNHKPS  NTKVDKKVEP  KSCDKTHTCP  PCPAPELLGG  PSVFLFPPKP  250
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KDTLMISRTP  EVTCVVVDVS  HEDPEVKFNW  YVDGVEVHNA  KTKPREEQYN  300
STYRVVSVLT  VLHQDWLNGK  EYKCKVSNKA  LPAPIEKTIS  KAKGQPREPQ  350
VYTLPPSREE  MTKNQVSLTC  LVKGFYPSDI  AVEWESNGQP  ENNYKTTPPV  400
LDSDGSFFLY  SKLTVDKSRW  QQGNVFSCSV  MHEALHNHYT  QKSLSLSPG  449
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Light chain

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DIQMTQSPSS  LSASVGDRVT  ITCRSSETLV  HSSGNTYLEW  YQQKPGKAPK  50'
LLIYRVSNRF  SGVPSRFSGS  GSGTDFTLTI  SSLQPEDFAT  YYCFQGSFNP  100'
LTFGQGTKVE  IKRTVAAPSV  FIFPPSDEQL  KSGTASVVCL  LNNFYPREAK  150'
VQWKVDNALQ  SGNSQESVTE  QDSKDSTYSL  SSTLTLSKAD  YEKHKVYACE  200'
VTHQGLSSPV  TKSFNRGEC                                      219'
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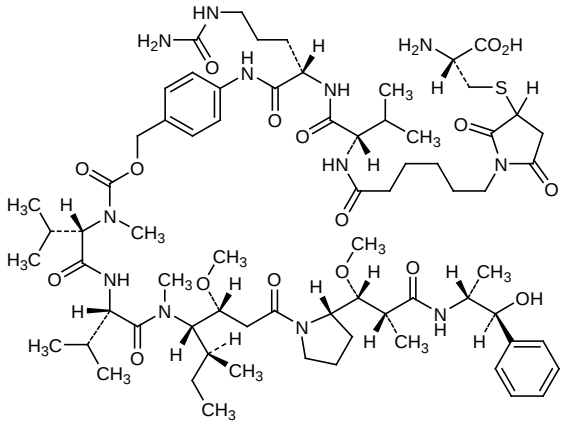
Disulfide bridges

22-96	22"-96"	23'-93'	23'"-93'"	139'-199'	139'"-199'"	147-203	147"-203"
219'-223*	219'"-223"*	229-229"*	232-232"*	264-324	264"-324"	370-428	370"-428"

* 2 or 3 inter-chain disulfide bridges are reduced

Modified residues

C
An average of 3 to 4 of the 219', 219", 223, 223", 229, 229' 232 and 232" cysteines are thioether bounded to vedotin



Glycosylation sites (N)

Asn-300 Asn-300"

MOLECULAR FORMULA	$C_{6504}H_{10028}N_{1744}O_{2018}S_{46}(C_{68}H_{106}N_{11}O_{15})_n$
MOLECULAR WEIGHT	151.7 kDa (n = 4)
TRADEMARK	None as yet
SPONSOR	Genentech/Roche
CODE DESIGNATIONS	NaPi3b; DNIB0600A
CAS REGISTRY NUMBER	1401812-88-1
UNII	7IUT83FK6S
WHO NUMBER	9835

gbk