STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (JK-216)	MODAKAFUSP ALFA
PRONUNCIATION	moe da' ka fusp al' fa
THERAPEUTIC CLAIM	Treatment of multiple myeloma

CHEMICAL NAMES

1. Immunoglobulin G4 [228-proline], anti-(human antigen CD38) (human-Rattus norvegicus monoclonal TAK-573 γ4-chain) Fc C-terminal fusion protein with human interferon α2b [106-alanine,145-aspartic acid], disulfide with human-Rattus norvegicus monoclonal TAK-573 κ-chain, dimer (Source: CAS)

2. Immunoglobulin G4-kappa, anti-[human ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1 (EC:3.2.2.6) (ADPRC 1/cADRp hydrolase 1, cell surface antigen CD38)], humanized monoclonal antibody, fused at each C-terminus of the heavy chains (1-447, 1''-447'') to attenuated human interferon α-2b (IFNα2b) variant (K^{23}>R^{470}, T^{106}>A^{553}, A^{145}>D^{592}) (448-612, 448''-612''); gamma4 heavy chain humanized fused to IFNα2b (1-612) [VH (*Homo sapiens* IGHV1-69-2*01 (90.7%) -(IGHD)- IGHJ4*01 (85.7%)) CDRIMGT [8.8.13] (26-33.51-58.97-109) (1-120)-*Homo sapiens* IGHG4*01, G4v5 h P10 (CH1 (121-218), hinge 1-12 S^{10}>P (228) (219-230), CH2 (231-340), CH3 (341-445), CHS (446-447))(121-447), fused to IFNα2b K^{23}>R (470), T^{106}>A (553), A^{145}>D (592) (448-612)],(134-214')-disulfide with kappa light chain humanized (1'-214') [V-KAPPA (Homo sapiens IGKV1-33*01 (83.2%) -IGKJ4*01 (100%)) CDR-IMGT [6.3.9] (27-32.50- 52.89-97) (1'-107') -Homo sapiens IGKC*01 (100%), Km3 A45.1 (153), V^{101} (191) (108'-214')]; dimer (226-226'':229-229'')-bisdisulfide; produced in Chinese hamster ovary (CHO) K1SV cells, glycoform alfa (Source : WHO pINN list 122)

STRUCTURAL FORMULA

Heavy chain (anti-CD38 γ4-IFNα2b)

EVQLVQSGAE	VKKPGATVKI	SCKVSGYTFT	DSVMNWVQQA	PGKGLEWMGW	50
IDPEYGRTDV	AEKFQGRVTI	TADTSTDTAY	MELSSLRSED	TAVYYCARTK	100
YNSGYGFPYW	GQGTTVTVSS	ASTKGPSVFP	LAPCSRSTSE	STAALGCLVK	150
DYFPEPVTVS	WNSGALTSGV	HTFPAVLQSS	GLYSLSSVVT	VPSSSLGTKT	200
YTCNVDHKPS	NTKVDKRVES	KYGPPCPPCP	APEFLGGPSV	FLFPPKPKDT	250
LMISRTPEVT	CVVVDVSQED	PEVQFNWYVD	GVEVHNAKTK	PREEQFNSTY	300
RVVSVLTVLH	QDWLNGKEYK	CKVSNKGLPS	SIEKTISKAK	GQPREPQVYT	350
LPPSQEEMTK	NQVSLTCLVK	GFYPSDIAVE	WESNGQPENN	YKTTPPVLDS	400
DGSFFLYSRL	TVDKSRWQEG	NVFSCSVMHE	ALHNHYTQKS	LSLSLGKCDL	450
PQTHSLGSRR	TLMLLAQMRR	ISLFSCLKDR	HDFGFPQEEF	GNQFQKAETI	500
PVLHEMIQQI	FNLFSTKDSS	AAWDETLLDK	FYTELYQQLN	DLEACVIQGV	550
GVAETPLMKE	DSILAVRKYF	QRITLYLKEK	KYSPCAWEVV	RDEIMRSFSL	600
STNLQESLRS	KE				612

Light chain

DIQMTQSPSS	LSASVGDRVT	ITCKASQNVD	SDVDWYQQKP	GKAPKLLIYK	50'
ASNDYTGVPS	RFSGSGSGTD	FTFTISSLQP	EDIATYYCMQ	SNTHPRTFGG	100'
GTKVEIKRTV	AAPSVFIFPP	SDEQLKSGTA	SVVCLLNNFY	PREAKVQWKV	150'
DNALQSGNSQ	ESVTEQDSKD	STYSLSSTLT	LSKADYEKHK	VYACEVTHQG	200'
LSSPVTKSFN	RGEC				214'

Disulfide bridges

22-96	22''-96''	23'-88'	23'''-88'''	134'-194'	134'''-194'''	134-214'	134''-214'''
147-203	147''-203''	226-226''	229-229''	261-321	261''-321''	367-425	367''-425''
448-545	448''-545''	476-585	476''-585''				

Glycosylation sites (N)

297	297''

MOLECULAR FORMULA	$C_{8132}H_{12618}N_{2152}O_{2551}S_{66}$
MOLECULAR WEIGHT	183.5 kDa
TRADEMARK	None as yet
SPONSOR	Takeda Pharmaceuticals
CODE DESIGNATIONS	TAK-573, TEV-48573
CAS REGISTRY NUMBER	2254522-19-3
UNII	TN8CEX4UT2
WHO NUMBER	11306

gbk