

# STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (MN-157) LIXUDEBART  
 PRONUNCIATION lix ue' de bart  
 THERAPEUTIC CLAIM Treatment of advanced liver fibrosis

## CHEMICAL NAMES

Immunoglobulin G1 [236-phenylalanine,237-glutamic acid,333-serine,de-449-lysine], anti-(human claudin-1) (human-Rattus norvegicus monoclonal ALE.F02  $\gamma$ 1-chain), disulfide with human-Rattus norvegicus monoclonal ALE.F02  $\kappa$ -chain, dimer (ACI)

immunoglobulin G1- kappa, anti-[*Homo sapiens* CLDN1 (claudin-1) conformational epitope of the first extracellular loop (EL1)], humanized monoclonal antibody; gamma1 heavy chain humanized (1-448) [VH (*Homo sapiens* IGHV3-21\*01 (94.9%) - (IGHD) -IGHJ1\*01 (92.9%), CDR-IMGT [8.8.12] (26-33.51-58.97-108)) (1- 119) - *Homo sapiens* IGHG1\*03, G1m3, nG1m1 CH1 R120, CH3 E12, M14, CH2 IGHG1v39 CH2 F1.3, E1.2, S116 (CH1 R120 (216) (120-217), hinge 1-15 (218-232), CH2 L1.3>F (236) , L1.2>E (237), P116>S (333) (233-342), CH3 E12 (358), M14 (360) (343-447), CHS K2>del (448)) (120-448)], (222-214')-disulfide with kappa light chain humanized (1'-214') [V-KAPPA (*Homo sapiens* IGKV3-15\*01 (84.2%) - IGKJ1\*01 (100%), CDR-IMGT [6.3.9] (27-32.50-52.89-97)) (1'- 107') -*Homo sapiens* IGKC\*01 (100%), Km3 A45.1 (153), V101 (191) (108'-214')]; dimer (228-228":231-231")-bisdisulfide, produced in Chinese hamster ovary (CHO) cells, cell line CHO-K1, glycoform alfa

## STRUCTURAL FORMULA

### Heavy Chain: anti-CLDN1 $\gamma$ -chain (H, H'')

EVQLVESGGG	LVKPGGSLRL	SCAASGFSFS	SYGMNWVRQA	PGKGLEWVSS	50
ISPSGSYFYY	ADSVKGRFTI	SRDNAKNSLY	LQMNSLRAED	TAVYYCARLP	100
GFNPPFDHWG	QGTLVTVSSA	STKGPSVFPPL	APSSKSTSGG	TAALGCLVKD	150
YFPEPVTVSW	NSGALTSGVH	TFFPAVLQSSG	LYSLSSVVTV	PSSSLGTQTY	200
ICNVNHKPSN	TKVDKRVEPK	SCDKTHTCPP	CPAPEFEGGP	SVFLFPPKPK	250
DTLMISRTPE	VTCVVVDVSH	EDPEVKFNWY	VDGVEVHNAK	TKPREEQYNS	300
TYRVVSVLTV	LHQDWLNGKE	YKCKVSNKAL	PASIEKTISK	AKGQPREPQV	350
YTLPPSREEM	TKNQVSLTCL	VKGFYPSDIA	VEWESNGQPE	NNYKTTTPVL	400
DSDGSFFLYS	KLTVDKSRWQ	QGNVFSCSVM	HEALHNHYTQ	KSLSLSPG	448

### Light chain: anti-CLDN1 $\kappa$ -chain (L', L''')

DIQMTQSPAT	LSVSPGERAT	LSCKASQNVG	GNVDWYQWKP	GQAPRLLIYG	50'
ASNRYTGIPA	RFRGSGSGTE	FRTLTISLQSQ	EDFAVYYCLQ	YKNNPWTFGQ	100'
GTKVEIKRTV	AAPSVFIFPP	SDEQLKSGTA	SVVCLLNNFY	PREAKVQWKV	150'
DNALQSGNSQ	ESVTEQDSKD	STYLSLSTLT	LSKADYEKHK	VYACEVTHQG	200'

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

Intra-H(C23-C104)	<b>22-96</b>	<b>146-202</b>	<b>263-323</b>	<b>369-427</b>
	<b>22''-96''</b>	<b>146''-202''</b>	<b>263''-323''</b>	<b>369''-427''</b>
Intra-L(C23-C104)	<b>23'-88'</b>	<b>134'-194'</b>		
	<b>23'''-88'''</b>	<b>134'''-194'''</b>		
Inter-H-L(h 5-CL 126)	<b>222-214'</b>	<b>222''-214''</b>		
Inter-H-H(h 11, h 14)	<b>228-228''</b>	<b>231-231''</b>		

**N-Glycosylation sites: in green bold text**

**299**      **299''**      (H CH2 N84.4): Fucosylated complex bi-antennary CHO-type glycans

**Engineered Modifications to Fc Region (mutations in sequence numbering, definitions in IMGT location)**

<u><b>L236&gt;F</b></u>	<u><b>L236''&gt;F</b></u>	G1v39 H, H'': CH2 F1.3, E1.2, S116 (Reduces C1q binding and FcγR effector properties)
<u><b>L237&gt;E</b></u>	<u><b>L237''&gt;E</b></u>	"
<u><b>P116&gt;S</b></u>	<u><b>P116''&gt;S</b></u>	"

**CDR-IMGT Regions: in bold light blue** (protein sequence numbering from above sequence, not IMGT respective sequence numbering)

Heavy Chain CDR1-3 (H):	<b>26-33 (8)</b>	<b>51-58 (8)</b>	<b>97-108 (12)</b>
Heavy Chain CDR1-3 (H''):	<b>26''-33'' (8)</b>	<b>51''-58'' (8)</b>	<b>97''-108'' (12)</b>
Light Chain CDR1-3 (L):	<b>27'-32' (6)</b>	<b>50'-52' (3)</b>	<b>89'-97' (9)</b>
Light Chain CDR1-3 (L''):	<b>27'''-32''' (6)</b>	<b>50'''-52''' (3)</b>	<b>89'''-97''' (9)</b>

**MOLECULAR FORMULA**      C<sub>6442</sub>H<sub>9902</sub>N<sub>1726</sub>O<sub>2000</sub>S<sub>44</sub> (unglycosylated)

**MOLECULAR WEIGHT**      144.94 kDa (unglycosylated)

**TRADEMARK**      None as yet

**SPONSOR**      Alentis Therapeutics AG

**CODE DESIGNATIONS**      ALE.F02

**CAS REGISTRY NUMBER**      2749515-10-2

**UNII**      STN3UZ6YBJ

**WHO NUMBER**      12552

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