Data Sheet (Cat.No.T76883)

TargetMol

Talacotuzumab

Chemical Properties

CAS No. : 1826831-79-1

Formula:

Molecular Weight: 147.62 kDa

Storage: Store at low temperature
-20°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Talacotuzumab (JNJ 56022473) is an IgG1 fully humanized CD123 neutralizing monoclonal antibody containing a modified Fc structure. Talacotuzumab has a high affinity for CD123, CD32b/c, CD16-158F and CD16-158V, with KD of 0.43 nM, 188 nM, 46 nM and 16.8 nM, respectively. Talacotuzumab inhibits IL-3 signaling in target cells by inhibiting IL-3 binding to CD123. Talacotuzumab induces mutations in the Fc region to increase affinity for CD16 (FCγriiia), thereby enhancing antibody-dependent cell-mediated cytotoxicity (ADCC). Talacotuzumab inhibits leukemia cell growth in xenografted mouse models of acute myeloid leukemia (AML).
Targets(IC50)	Immunology/Inflammation related,Interleukin
In vitro	With an IC50 of 5 ng/ml (33 pM), Talacotuzumab (JNJ 56022473; CSL 362) potently mediates antibody-dependent cell-mediated cytotoxicity (ADCC) in TF-1 cells [1]. Following a 24-hour pretreatment at 1 μg/ml,Talacotuzumab inhibits the production of IFN-α in plasmacytoid dendritic cells and eosinophils in SLE (systemic lupus erythematosus) donor and healthy donor plasma-like dendritic cells. This inhibition occurs when these cells are stimulated with TLR7 (imiquimod; 0.5 μM; 6 days) and TLR9 (CpG C; 0.5 μM; 6 days). However, Talacotuzumab does not significantly reduce IFN-α production induced by TLR4 stimulation (LPS; 10 μg/ml). The inhibitory effect of Talacotuzumab on plasmacytoid dendritic cell (pDC) proliferation and expansion induced by TLR7 and TLR9 is achieved through the depletion of pDC [2].
In vivo	In mice with xenografts of acute myeloid leukemia,Talacotuzumab (JNJ 56022473; CSL 362; 300 μg; intraperitoneal injection; three times per week for 5 weeks) significantly delays tumor growth compared to the isotype control [1]. Talacotuzumab (1, 10, 30 mg/kg; subcutaneous injection; single dose) in juvenile cynomolgus monkeys reaches maximum serum concentrations of 12, 190, and 380 μg/ml at doses of 1, 10, and 30 mg/kg, respectively, within 48 hours [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.0068 mL	0.0339 mL	0.0677 mL
5 mM	0.0014 mL	0.0068 mL	0.0135 mL
10 mM	0.0007 mL	0.0034 mL	0.0068 mL
50 mM	0.0001 mL	0.0007 mL	0.0014 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.