Data Sheet (Cat.No.T39730)

TargetMol

Datopotamab deruxtecan

Chemical Properties

CAS No. : 2238831-60-0

Formula:

Molecular Weight: 145.16 kDa

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

Datopotamab deruxtecan

Biological Description

Description	Datopotamab deruxtecan (DS-1062) is an antibody-drug conjugate (ADC) that targets tropomyosin 2 (TROP2) on the surface of trophoblast cells. Datopotamab deruxtecan exhibits antitumor activity by specifically binding to TROP2 and internalizing, releasing DXd to inhibit topoisomerase I (IC_{50} = 0.31 μM), thereby inducing DNA damage and apoptosis. Datopotamab deruxtecan induces significant antibody-dependent cellular cytotoxicity in the presence of peripheral blood lymphocytes and inhibits tumor growth in xenograft models.
Targets(IC50)	Antibody-Drug Conjugates (ADCs),TROP2,Topoisomerase
In vitro	**Methods**: Add Datopotamab deruxtecan at concentration gradients (0.01, 0.1, 0.5, 5.0, 50 μg/mL) to USC cell lines, incubate for 72 hours, then assess cell viability via flow cytometry. **Results**: TROP2-high cells exhibited high sensitivity to Dato-DXd, while TROP2-low cells showed poor sensitivity. [1]
In vivo	**Methods**: TROP2-overexpressing USC cells were subcutaneously implanted into SCID mice. After tumor formation, mice were grouped as follows: Datopotamab deruxtecan, control ADC, datopotamab monoclonal antibody, and solvent control. A single intraperitoneal injection (10 mg/kg) was administered on Day 0, followed by 50 days of maintenance. **Results**: Compared to the control group, tumor growth was significantly suppressed and overall survival was markedly prolonged in the Datopotamab deruxtecan-treated mice. [1] **Methods**: Male cynomolgus monkeys received intravenous Datopotamab deruxtecan at 6 mg/kg. Plasma concentrations of Datopotamab deruxtecan, total antibody, and DXd, along with tumor DXd concentrations, were measured over 21 days post-administration. **Results**: High and sustained DXd concentrations were observed in tumors, while plasma levels remained low, indicating efficient drug delivery to tumors. [2]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.0069 mL	0.0344 mL	0.0689 mL
5 mM	0.0014 mL	0.0069 mL	0.0138 mL
10 mM	0.0007 mL	0.0034 mL	0.0069 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.