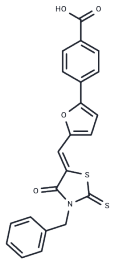
Data Sheet (Cat.No.T3638)

TargetMol

Leukadherin-1

Chemical Properties



CAS No. : 344897-95-6

Formula: C22H15NO4S2

Molecular Weight: 421.49

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Leukadherin-1 is an allosteric activator of CD11b/CD18. Increasing CD11b/CD18-dependent cell adhesion to fibrinogen, Decreasing leukocyte motility and transendothelial migration; reduces inflammation.
Targets(IC50)	Complement System,Integrin
In vitro	Leukadherin-1 pretreatment reduces secretion of interferon (IFN)-γ, tumour necrosis factor (TNF) and macrophage inflammatory protein (MIP)-1β by monokine-stimulated NK cells. It also reduces secretion of IL-1β, IL-6 and TNF by Toll-like receptor (TLR)-2 and TLR-7/8-stimulated monocytes. Leukadherin-1 modulates NK cell cytokine secretion and does not modulate Syk activation in NK cells[1]. LA1 increases CD11b/CD18-dependent cell adhesion to fibrinogen with 50% effective concentration (EC50, the effective concentration for a 50% increase in adhesion) values of 4 μM[3].
In vivo	Leukadherin-1 has potent anti-inflammatory effects in a range of animal models, including an autoimmune nephritis model, without obvious short-term side effects[1]. Leukadherin-1 (LA1) increases leukocyte adhesion, preventing their transmigration and tissue recruitment in vivo. LA1 treatment reduces interstitial leukocyte infiltration in the allograft, reduces neointimal hyperplasia and glomerular damage, and prolongs graft survival from 48.5% (CsA only) to 100% (CsA and LA1) on day 60 in a mouse model of fully MHC-mismatched orthotopic kidney transplantation[2].
Cell Research	NK cell stimuli (where used) were added as follows: (1) Syk inhibitor (1 μM), (2) Leukadherin-1 or dimethylsulphoxide (DMSO) (vector control) (7.5 μM). Shown to induce 82% of maximum response with negligible off-target effect, (3) anti-CD210 or isotype control (5 μg/ml), (4) 30-45 min after Leukadherin-1 NK cells were stimulated with combinations of IL-12 (10 ng/ml), IL-15 (30 ng/ml) or IL-18 (10 ng/ml): either IL-12+IL-15 or IL-12+IL-18. Monocytes were stimulated using pam3csk4 (TLR-2 agonist, 300 ng/ml) or R848 (TLR-7/8 agonist, 2 μg/ml). Supernatants were stored at –80°C for<1 month before quantification. To exclude non-specific Leukadherin-1-mediated cytotoxicity, cell viability is assessed at 24 h using the CellTitre-Glo reagent. (Only for Reference)

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 15 mg/mL (35.59 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3725 mL	11.8627 mL	23.7254 mL
5 mM	0.4745 mL	2.3725 mL	4.7451 mL
10 mM	0.2373 mL	1.1863 mL	2.3725 mL
50 mM	0.0475 mL	0.2373 mL	0.4745 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.

Reference

Roberts AL, et al. Clin Exp Immunol. 2016, 185(3):361-71.
Khan SQ, et al. Front Med (Lausanne). 2014, 1:45.
Maiguel D, et al. Sci Signal. 2011, 4(189):ra57.