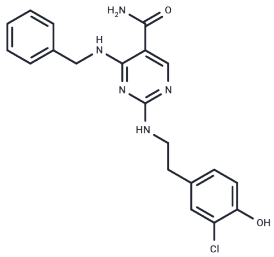
Data Sheet (Cat.No.T4476)

TargetMol

AS1517499

Chemical Properties



CAS No. : 919486-40-1

Formula: C20H20ClN5O2

Molecular Weight: 397.86

Storage: 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	AS1517499 is a blood-brain barrier permeable inhibitor of STAT6 phosphorylation (IC50= 21 nM).
Targets(IC50)	STAT
In vitro	**METHODS**: Western Blot was used to detect the expression levels of AS1517499 in human BSM cells treated with 100 nM AS1517499. **RESULTS**: Treatment of BSM cells with AS1517499 inhibited IL-13-induced STAT6 phosphorylation and up-regulation of RhoA. [1]
In vivo	**METHODS**: To investigate the effect of AS1517499 on the development of antigen-induced BSM hyperreactivity, AS1517499 (10 mg/kg) was administered intraperitoneally to mice 1 hour before each ovalbumin exposure. **RESULTS**: AS1517499 completely inhibited the antigenicity induced upregulation of RhoA and BSM hyperreactivity. [1]
Cell Research	Normal human BSM cells (hBSMCs) are maintained in SmBM medium supplemented with 5% fetal bovine serum, 0.5 ng/mL human epidermal growth factor (hEGF), 5 μg/mL insulin, 2 ng/mL human fibroblast growth factor-basic (hFGFb), 50 μg/mL gentamicin, and 50 ng/mL amphotericin B. Cells are maintained at 37°C in a humidified atmosphere (5% CO2), fed every 48 to 72 hours, and passaged when cells reached 90 to 95% confluence. Then the hBSMCs (passages 7-9) are seeded in 6-well plates and 8-well chamber slides at a density of 3,500 cells/cm2 and, when 80 to 85% confluence observed, cells are cultured without serum for 24 hours before addition of recombin is ant human IL-13. AS1517499 (100 nM) or its vehicle (0.3% DMSO) is treated 30 minutes before the addition of IL-13 (100 ng/mL). In some experiments, AS1517499 is treated 0 (co-incubation), 3, or 12 hours after the addition of IL-13. In another series of experiments, a selective Rho-kinase inhibitor Y-27632 (1 μM) or its vehicle (0.3% DMSO) is also applied 15 minutes before the IL-13 application. At the indicated time after the IL-13 treatment, cells are washed with PBS, immediately collected, and disrupted with 1× SDS sample buffer (250 μL/well), and used for Western blot analyses[2] .
Animal Research	Mice[2]

Solubility Information

Solubility	DMSO: 262.5 mg/mL (659.78 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (12.57 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5134 mL	12.5672 mL	25.1345 mL
5 mM	0.5027 mL	2.5134 mL	5.0269 mL
10 mM	0.2513 mL	1.2567 mL	2.5134 mL
50 mM	0.0503 mL	0.2513 mL	0.5027 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

Chiba Y, et al. A novel STAT6 inhibitor AS1517499 ameliorates antigen-induced bronchial hypercontractility in mice. Am J Respir Cell Mol Biol. 2009 Nov;41(5):516-24.

Qin R, Wang T, He W, et al.Jak2/STAT6/c-Myc pathway is vital to the pathogenicity of Philadelphia-positive acute lymphoblastic leukemia caused by P190BCR-ABL.Cell Communication and Signaling.2023, 21(1): 27.

Am J Respir Cell Mol Biol. 2009 Nov;41(5):516-24.

Tao Y, Xu L, Liu X, et al.Chitosan-coated artesunate protects against ulcerative colitis via STAT6-mediated macrophage M2 polarization and intestinal barrier protection.International Journal of Biological Macromolecules. 2023: 127680.