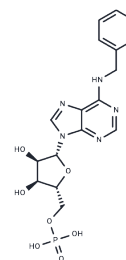


IST5-002

## Chemical Properties

CAS No. : 13484-66-7  
 Formula: C<sub>17</sub>H<sub>20</sub>N<sub>5</sub>O<sub>7</sub>P  
 Molecular Weight: 437.34  
 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	IST5-002 (N6-Benzyladenosine-5'-phosphate) is a selective Stat5a/b inhibitor with anticancer activity that inhibits the transcriptional activity of Stat5a/b and induces apoptosis and death of prostate cancer cells and chronic myelogenous leukemia (CML) cells, which can be used for cancer research.
Targets(IC50)	Apoptosis,STAT
In vitro	IST5-002 is a potent Stat5a/b inhibitor that selectively blocks the transcriptional activity of Stat5a and Stat5b with IC <sub>50</sub> values of 1.5 μM (Stat5a) and 3.5 μM (Stat5b), respectively. IST5-002 showed significant inhibitory effects on both Stat5a and Stat5b in a variety of cellular assays. Under different dosage and time conditions, IST5-002 was able to inhibit Bcr-Abl-induced Stat5a/b phosphorylation in K562 cells (0-40 μM, 3 h), Stat5a/b phosphorylation in T47D cells (5-100 μM, 2 h), and Stat5 dimerization and nuclear translocation in PC-3 cells, as well as inhibit the Stat5 target gene and DNA binding in COS-7 cells. In CWR22Rv1 and LNCaP cells, IST5-002 (2-50 μM, 48 h) significantly reduced the expression of Stat5a/b target genes such as Bcl-xL and cyclin D1. In addition, IST5-002 inhibited the growth of human prostate cancer cells by inducing apoptosis at high concentrations (3.1-50 μM, 72 hours) and triggered epithelial cell death in patient-derived prostate cancer samples cultured in vitro (25-100 μM, 7 days). IST5-002 (5 μM, 24-72 h) similarly inhibited Stat5a/b phosphorylation and induced apoptosis in Imatinib-sensitive and -resistant chronic granulocytic leukemia (CML) cells. [1]
In vivo	Tumor growth was effectively inhibited in a prostate cancer xenograft model by intraperitoneal injection of 25-100 mg/kg IST5-002 once daily for 10 days. [1]

## Solubility Information

Solubility	H <sub>2</sub> O: 100 mg/mL (228.66 mM),Sonication is recommended. DMSO: 100 mg/mL (228.66 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.2866 mL	11.4328 mL	22.8655 mL
5 mM	0.4573 mL	2.2866 mL	4.5731 mL
10 mM	0.2287 mL	1.1433 mL	2.2866 mL
50 mM	0.0457 mL	0.2287 mL	0.4573 mL

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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

Liao Z, et al. Structure-Based Screen Identifies a Potent Small Molecule Inhibitor of Stat5a/b with Therapeutic Potential for Prostate Cancer and Chronic Myeloid Leukemia. Mol Cancer Ther. 2015 Aug;14(8):1777-93.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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