

JAK-2/3-IN-3

## Chemical Properties

CAS No. :

Formula: C<sub>13</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>4</sub>O<sub>2</sub>

Molecular Weight: 325.15

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	JAK-2-/3-IN-3 (compound ST4j) is a potent inhibitor of JAK2/3, with IC <sub>50</sub> values of 13.00 and 14.86 nM for JAK2 and JAK3, respectively. It inhibits JAK2 autophosphorylation, induces apoptosis in a time- and dose-dependent manner, and can be used in lymph-derived diseases and leukemia research [1].
Targets(IC <sub>50</sub> )	Apoptosis,Others,JAK
In vitro	JAK-2/3-IN-3, within a concentration range of 0-100 μM over 72 hours, selectively targets human erythroleukemia cells, demonstrating minimal toxicity towards normal cells. It exerts its effect primarily through inhibiting the JAK2/STAT5 signaling pathway, crucial for the proliferation of erythroleukemia TF1 cell line. Additionally, exposure to 15.53 μM of JAK-2/3-IN-3 induces apoptosis in a time-dependent manner within TF1 cells, culminating in increased apoptotic rates of approximately 20%, 40%, and 70% after 24, 48, and 72 hours, respectively. Further dose-dependent investigations reveal escalating apoptosis within TF1 cells at concentrations corresponding to IC <sub>25</sub> , IC <sub>50</sub> , and IC <sub>75</sub> over a 24-hour period, with noted apoptotic increases of approximately 15%, 20%, and 30%. In cell cytotoxicity assays involving TF1, HEL, Vero, and HepG2 cells treated with up to 100 μM of JAK-2/3-IN-3 for 72 hours, the compound demonstrated inhibition of TF1 and HEL cell growth with IC <sub>50</sub> values of 15.53 and 17.90 μM, respectively, while proving less toxic to normal Vero and HepG2 cells, with IC <sub>50</sub> values exceeding 100 μM for Vero cells and 50 μM for HepG2 cells.

### Preparing Stock Solutions

---

	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	3.0755 mL	15.3775 mL	30.755 mL
5 mM	0.6151 mL	3.0755 mL	6.151 mL
10 mM	0.3076 mL	1.5378 mL	3.0755 mL
50 mM	0.0615 mL	0.3076 mL	0.6151 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.

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

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481