# STAT5-IN-2

**Cat. No.:** HY-102048

**CAS No.:** 2111834-61-6

**Molecular Formula:** $C_{26}H_{27}N_3O$

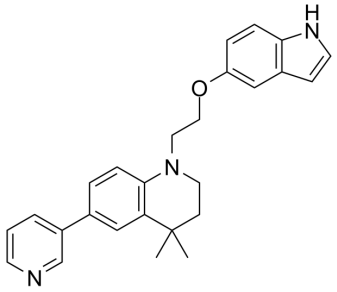
**Molecular Weight:** 397.51

**Target:** STAT; Apoptosis

**Pathway:** JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 2 years |
| | -20°C | 1 year |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 100 mg/mL (251.57 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.5157 mL | 12.5783 mL | 25.1566 mL |
| | 5 mM | 0.5031 mL | 2.5157 mL | 5.0313 mL |
| | 10 mM | 0.2516 mL | 1.2578 mL | 2.5157 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.29 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

STAT5-IN-2 is a STAT5 inhibitor, extracted from reference 1, example 17f. STAT5-IN-2 has potent antileukemic effect[1].

**$IC_{50}$ & Target**

| | |
|---|---|
| STAT5<br>9 μM (EC50, in K562 cells) | STAT5<br>5 μM (EC50, in KU812 cells ) |

**In Vitro**

STAT5-IN-2 has $EC_{50}$ values of 9 μM and 5 μM in K562 and KU812 cells, respectively[1].
STAT5-IN-2 (100 nM-50 μM; 48 hours) has $EC_{50}$ values of 2.6 μM and 3.5 μM in KG1a and MV-4-11 cells, respectively[1].
STAT5-IN-2 (10 μM; 48 hours) induces apoptosis in all cell lines (K562, KU812, KG1a and MV-4-11 cells)[1].
STAT5-IN-2 (10 μM; 24 hours) blocks phosphorylation of STAT5[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

| | |
|---|---|
| Cell Line: | KG1a and MV-4-11 cell lines |
| Concentration: | 100 nM, 10 μM, 20 μM, 30 μM, 40 μM, 50 μM |
| Incubation Time: | 48 hours |
| Result: | Inhibited cell growth in KG1a and MV-4-11 cell lines |

Apoptosis Analysis[1]

| | |
|---|---|
| Cell Line: | K562, KU812, KG1a and MV-4-11 cells |
| Concentration: | 10 μM |
| Incubation Time: | 48 hours |
| Result: | Significantly increased the number of apoptotic cells. |

Western Blot Analysis[1]

| | |
|---|---|
| Cell Line: | KG1a, MV-4-11 and KU812 cells |
| Concentration: | 10 μM |
| Incubation Time: | 24 hours |
| Result: | Inhibited phosphorylation of STAT5 compared to no influence on phosphorylation level of STAT3, Akt and Erk1/2. |

## CUSTOMER VALIDATION

- J Exp Med. 2021 Sep 6;218(9):e20210009.
- J Immunol. 2022 Aug 29;ji2200195.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Ludovic Juen, et al. New Inhibitor Targeting Signal Transducer and Activator of Transcription 5 (STAT5) Signaling in Myeloid Leukemias. J Med Chem. 2017 Jul 27;60(14):6119-6136.



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