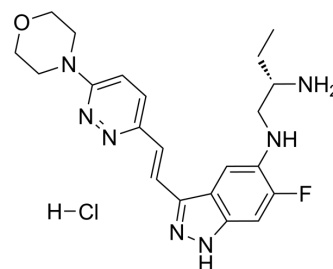


YE6144

| | | | |
|---------------------------|---|-------|----------|
| Cat. No.: | HY-150095 | | |
| Molecular Formula: | C ₂₁ H ₂₇ ClFN ₇ O | | |
| Molecular Weight: | 447.94 | | |
| Target: | Others | | |
| Pathway: | Others | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (223.24 mM); ultrasonic and warming and heat to 60°C

| Preparing Stock Solutions | Concentration | Mass | | |
|---------------------------|---------------|-----------|------------|------------|
| | | 1 mg | 5 mg | 10 mg |
| | 1 mM | 2.2324 mL | 11.1622 mL | 22.3244 mL |
| | 5 mM | 0.4465 mL | 2.2324 mL | 4.4649 mL |
| | 10 mM | 0.2232 mL | 1.1162 mL | 2.2324 mL |

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 10 mg/mL (22.32 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 10 mg/mL (22.32 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 10 mg/mL (22.32 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

YE6144 is a prototypical interferon regulatory factor 5 (IRF5) inhibitor. YE6144 selectively suppresses IRF5 activity through inhibition of IRF5 phosphorylation^[1].

IC₅₀ & Target

IRF5^[1]

In Vitro

YE6144 (1 or 3 μM; 30 min) inhibits the phosphorylation of IRF5 in both human PBMCs and mouse splenocytes^[1].
YE6144 (0-10 μM; 30 min) inhibits the production of type I IFNs with an IC₅₀ of approximately 0.09 μM in human HC PBMCs^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | | |
|---------|---|---|
| | Western Blot Analysis ^[1] | |
| | Cell Line: | Human HC PBMCs and mouse WT splenocytes |
| | Concentration: | 1 μ M (PBMCs) and 3 μ M (splenocytes) |
| | Incubation Time: | 30 min |
| | Result: | Inhibited the phosphorylation of IRF5. |
| | RT-PCR ^[1] | |
| | Cell Line: | Mouse WT splenocytes |
| | Concentration: | 3 μ M |
| | Incubation Time: | 30 min |
| | Result: | Induction of type I IFN genes, <i>Ifnb1</i> and <i>Ifna</i> stimulated by TLR7 ligands or TLR9 ligands was remarkably weakened. |
| In Vivo | YE6144 (40.0 mg/kg; s.c.; once) suppresses the progression of mouse systemic lupus erythematosus ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. | |
| | Animal Model: | NZB/W F1 mouse model of systemic lupus erythematosus (SLE) ^[1] |
| | Dosage: | 40.0 mg/kg |
| | Administration: | Subcutaneous injection, once |
| | Result: | Suppressed the exacerbation of autoantibody production. Splenomegaly and renal dysfunction were also suppressed by the treatment after disease onset. |

REFERENCES

[1]. Ban T, et al. Genetic and chemical inhibition of IRF5 suppresses pre-existing mouse lupus-like disease. *Nat Commun.* 2021 Jul 19;12(1):4379.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA