# TPO agonist 1

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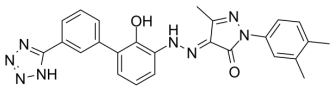
|---|---|
| **Cat. No.:** | HY-100380 |
| **CAS No.:** | 1033040-23-1 |
| **Molecular Formula:** | $C_{25}H_{22}N_8O_2$ |
| **Molecular Weight:** | 466.49 |
| **Target:** | Thrombopoietin Receptor |
| **Pathway:** | Immunology/Inflammation |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 2 years<br>-20°C 1 year |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : ≥ 36 mg/mL (77.17 mM)

* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.1437 mL | 10.7183 mL | 21.4367 mL |
| 5 mM | 0.4287 mL | 2.1437 mL | 4.2873 mL |
| 10 mM | 0.2144 mL | 1.0718 mL | 2.1437 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2 mg/mL (4.29 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2 mg/mL (4.29 mM); Suspended solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

TPO agonist 1 is a thrombopoietin (TPO) agonist extracted from patent WO2008134338A1, compound TPO mimetic. It would be useful as promoters of thrombopoiesis and megakaryocytopoiesis to treat thrombocytopenia[1].

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

TPO receptor[1]

**In Vivo**

The thrombopoietin (TPO) receptor agonists are novel treatments for patients with chronic ITP aimed at increasing platelet production through interactions with the TPO receptor on megakaryocytes, and can increases platelet counts, decrease bleeding events and reduce the need for adjunctive or rescue treatments. The TPO receptor agonists are well-tolerated, though uncertainty remains regarding the risk of thromboembolism and bone marrow fibrosis[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Jerome Francis Hayes. Novel processes of making hydroxy-1-azo-derivatives as tpo mimetics. 6 November 2008. WO2008134338A1.

[2]. Siegal D et al. Thrombopoietin receptor agonists in primary immune thrombocytopenia. et al. Semin Hematol. 2013 Jan;50 Suppl 1:S18-21



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