# **Product** Data Sheet

### **SEMBL**

Cat. No.: HY-124651 CAS No.: 1443448-82-5 Molecular Formula: C<sub>12</sub>H<sub>11</sub>NO<sub>4</sub> Molecular Weight: 233.22 Target: NF-κB; MMP

Pathway: NF-κB; Metabolic Enzyme/Protease

Storage: Powder

> 4°C 2 years

3 years

-20°C

In solvent

-80°C 6 months -20°C 1 month

#### **SOLVENT & SOLUBILITY**

In Vitro

DMSO: 100 mg/mL (428.78 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	4.2878 mL	21.4390 mL	42.8780 mL
	5 mM	0.8576 mL	4.2878 mL	8.5756 mL
	10 mM	0.4288 mL	2.1439 mL	4.2878 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: ≥ 2.5 mg/mL (10.72 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE- $\beta$ -CD in saline) Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution
- 3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution

## **BIOLOGICAL ACTIVITY**

Description	SEMBL is a potent NF-κB inhibitor. SEMBL can inhibit NF-κB-DNA binding, and also inhibits NF-κB-dependent inflammatory cytokine secretions. SEMBL inhibits cancer cell migration and invasion via decreasing MMP expression. SEMBL can be used for researching anticancer <sup>[1]</sup> .
IC <sub>50</sub> & Target	NF-κB, MMP-2 <sup>[1]</sup>
In Vitro	SEMBL inhibits MMP-2 expression and cellular metastatic activity in ovarian carcinoma cells $^{[1]}$ .

SEMBL inhibits the cell-free DNA binding of NF- $\kappa$ B in the ES-2 nuclear extract and inhibits the constitutively activated NF- $\kappa$ B activity in ovarian carcinoma cells<sup>[1]</sup>.

SEMBL inhibits cellular migration, invasion and MMP-2 expression in ovarian carcinoma cells at non-toxic concentrations<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### **REFERENCES**

[1]. Umezawa K, et al. Inhibition of matrix metalloproteinase expression and cellular invasion by NF-κB inhibitors of microbial origin. Biochim Biophys Acta Proteins Proteom. 2020;1868(6):140412.

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

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