**BIO5192 hydrate**

**Cat. No.:** HY-107589A  
**Molecular Formula:** C₃₈H₄₆Cl₂N₆O₈S₁/₂H₂O  
**Molecular Weight:** 826.79  
**Target:** Integrin  
**Pathway:** Cytoskeleton  
**Storage:** -20°C, sealed storage, away from moisture  
* In solvent: -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

## SOLVENT & SOLUBILITY

### In Vitro

DMSO: ≥ 100 mg/mL (120.95 mM)  
* “≥” means soluble, but saturation unknown.

**Preparing Stock Solutions**

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.2095 mL</td>
<td>6.0475 mL</td>
<td>12.0950 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.2419 mL</td>
<td>1.2095 mL</td>
<td>2.4190 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1209 mL</td>
<td>0.6047 mL</td>
<td>1.2095 mL</td>
</tr>
</tbody>
</table>

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 (3.02 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (3.02 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

BIO5192 hydrate is a selective and potent integrin α4β1 (VLA-4) inhibitor (Kd<10 pM). BIO5192 hydrate selectively binds to α4β1 (IC₅₀=1.8 nM) over a range of other integrins. BIO5192 hydrate results in a 30-fold increase in mobilization of murine hematopoietic stem and progenitors (HSPCs) over basal levels.[1][2]

**IC₅₀ & Target**

<table>
<thead>
<tr>
<th>α4β1</th>
<th>α9β1</th>
<th>α2β1</th>
<th>α4β7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 nM (IC₅₀)</td>
<td>138 nM (IC₅₀)</td>
<td>1053 nM (IC₅₀)</td>
<td>&gt;500 nM (IC₅₀)</td>
</tr>
</tbody>
</table>

**In Vivo**

The combination of BIO5192 hydrate (1 mg/kg; i.v.) and Plerixafor (5 mg/kg; s.c.) exert an additive effect on progenitor mobilization[1]. BIO5192 hydrate (30 mg/kg; s.c; bid; during days 5 through 14) delays paralysis associated with EAE (experimental
autoimmune encephalomyelitis\(^2\).

BIO5192 hydrate (1 mg/kg, i.v.) shows the terminal half-life is 1.1 hours. BIO5192 hydrate (3, 10, and 30 mg/kg; s.c.) shows half-lives of 1.7, 2.7, and 4.7 hours, respectively. The blood plasma curves show that the AUC for the s.c. route of administration increased about 2.5-fold from 5,460 h*ng/ml for the 3 mg/kg dose to 14,175 h*ng/ml for the 30 mg/kg\(^1\).

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

---

**Animal Model:** C57BL/6J x 129Sv/J F1 mice\(^1\)

**Dosage:** 1 mg/kg (with Plerixafor: 5 mg/kg)

**Administration:** I.v.

**Result:** Exerted an additive effect on progenitor mobilization.

---

**Animal Model:** Healthy female Lewis rats weighing 150g\(^2\)

**Dosage:** 30 mg/kg

**Administration:** S.c; bid; during days 5 through 14

**Result:** Showed a 3-day delay in onset of disease.

---

**REFERENCES**


---

**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