**Baclofen**

**Cat. No.:** HY-B0007  
**CAS No.:** 1134-47-0  
**Molecular Formula:** C₁₀H₁₂ClNO₂  
**Molecular Weight:** 213.66  
**Target:** GABA Receptor  
**Pathway:** Membrane Transporter/Ion Channel; Neuronal Signaling  
**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: 4.81 mg/mL (22.51 mM; ultrasonic and warming and adjust pH to 4 with HCl and heat to 60°C)  
H₂O: 2 mg/mL (9.36 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass</th>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td></td>
<td>1 mM</td>
<td>4.6803 mL</td>
<td>23.4017 mL</td>
<td>46.8033 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mM</td>
<td>0.9361 mL</td>
<td>4.6803 mL</td>
<td>9.3607 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mM</td>
<td>0.4680 mL</td>
<td>2.3402 mL</td>
<td>4.6803 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: PBS  
Solubility: 2.5 mg/mL (11.70 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

---

**BIOLOGICAL ACTIVITY**

**Description**

Baclofen, a lipophilic derivative of γ-aminobutyric acid (GABA), is an orally active, selective metabotropic GABAB receptor (GABABR) agonist. Baclofen mimics the action of GABA and produces slow presynaptic inhibition through the GABAB receptor. Baclofen has high blood brain barrier penetrance. Baclofen has the potential for muscle spasticity research[1][2][3].

**In Vitro**

Baclofen (1, 10 μM; 24 h) causes markedly decreased lactate dehydrogenase (LDH) activity, indicating increased cell viability in wild-type or mutant huntingtin-expressing striatal cells (HD19 or HD43). Baclofen significantly increases chymotrypsin-like proteasome activity and cell viability were in the HD43 cells[3].  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

Baclofen (i.p.; 10 μg/g; twice daily for 3 consecutive days) ameliorates motor deficits in YAC128 HD transgenic mice[3].  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>Wild type (WT) and mutant (MT) male YAC128 mice at 13-18 months of age[3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>10 μg/g</td>
</tr>
<tr>
<td>Administration:</td>
<td>IP; twice daily at 9:00 a.m. and 5:00 p.m., for 3 consecutive days; then single dose on the fourth day at 9:00 a.m</td>
</tr>
<tr>
<td>Result:</td>
<td>Ameliorated motor deficits in YAC128 HD transgenic mice. Increased proteasome activity and reduces neuronal intranuclear inclusions (NIIs) in YAC128 HD transgenic mice.</td>
</tr>
</tbody>
</table>

**CUSTOMER VALIDATION**

- Cancer Res. 2023 Apr 14;CAN-22-3450.
- Life Sci. 2023 Sep 15;329:121984.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

**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