Moxonidine

Cat. No.: HY-B0374
CAS No.: 75438-57-2
Molecular Formula: C₉H₁₂ClN₅O
Molecular Weight: 241.68
Target: Imidazoline Receptor
Pathway: GPCR/G Protein; 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 : 20 mg/mL (82.75 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Concentration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 mM</td>
<td>4.1377 mL</td>
<td>20.6885 mL</td>
<td>41.3770 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.8275 mL</td>
<td>4.1377 mL</td>
<td>8.2754 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.4138 mL</td>
<td>2.0689 mL</td>
<td>4.1377 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 mg/mL (8.28 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2 mg/mL (8.28 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2 mg/mL (8.28 mM); Clear solution

BIOLOGICAL ACTIVITY

Moxonidine(BDF5895) is a selective agonist at the imidazoline receptor subtype 1, used as antihypertensive agent. Target: I1-R Moxonidine is a centrally acting antihypertensive agent. Mixed Nischarin (I₁ imidazoline receptor) and α₂-AR (adrenergic) agonist; displays 40-fold higher affinity for I₁ receptors versus α₂-adrenoceptors. Moxonidine reduced stimulated NE overflow (log EC50: -6.15 +/- 0.14). AGN192403, a selective ligand at I₁-R, had no influence on the dose-response curve of moxonidine (log EC50: -6.01 +/- 0.25) [1]. The hypotensive and bradycardic actions of moxonidine but not clonidine are mediated through imidazoline receptors and are dependent on intact
noradrenergic pathways within the RVLM. Furthermore, the noradrenergic innervation may be associated with a 42 kDa imidazoline receptor protein [2].

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