**Alniditan**

Cat. No.: HY-101698  
CAS No.: 152317-89-0  
Molecular Formula: C₁₇H₂₆N₄O  
Molecular Weight: 302.41  
Target: 5-HT Receptor  
Pathway: GPCR/G Protein; Neuronal Signaling  
Storage: Please store the product under the recommended conditions in the Certificate of Analysis.

**BIOLOGICAL ACTIVITY**

**Description**

Alniditan (Alnitidan) is a potent 5-HT₁B and 5-HT₁D receptors agonist, with IC₅₀ of 1.7 nM and 1.3 nM for h5-HT₁B and h5-HT₁D receptors in HEK 293 cells, respectively. Alniditan has migraine-preventive effects [1][2].

**IC₅₀ & Target**

<table>
<thead>
<tr>
<th>Target</th>
<th>IC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>human 5-HT₁B Receptor</td>
<td>1.7 nM (IC₅₀, in HEK 293 cell)</td>
</tr>
<tr>
<td>human 5-HT₁D Receptor</td>
<td>1.3 nM (IC₅₀, in HEK 293 cell)</td>
</tr>
<tr>
<td>5-HT₁B Receptor</td>
<td>0.9 nM (Kd)</td>
</tr>
<tr>
<td>5-HT₁D Receptor</td>
<td>1.2 nM (Kd)</td>
</tr>
</tbody>
</table>

**In Vitro**

In vitro, Alniditan exhibits little vasoconstrictive effects on the rat basilar artery, although at a very high concentration 1 mM, Alniditan causes intensive constriction, most likely through a mechanism independent from 5-HT receptor activation [1].  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

The intraperitoneal administration of Alniditan ED₅₀=9 μg/kg dose dependently reduces [¹²⁵I]-BSA extravasation in the rat meninges when done 30 min before stimulation. Alniditan dose dependently attenuates the neurogenic inflammation in vivo model of neurogenic inflammation [¹].  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**PROTOCOL**

After a stabilisation period of about 1 h, the animals are divided into three groups. In the first group (n=4), values of heart rate, mean arterial blood pressure, carotid blood flow and its distribution, as well as arterial and jugular venous blood gases are measured at baseline, and after four consecutive injections of physiological saline (0.5 mL, every 20 min). The second and third groups of animals (n=6 each) are pre-treated with saline (i.v.) or GR127935 (0.5 mg/kg, i.v.), respectively, given over a period of 5 min at a rate of 1 mL/min. After a waiting period of 15 min, baseline values of heart rate, mean arterial blood pressure, carotid blood flow and its distribution, as well as arterial and jugular venous blood gases are measured. Subsequently, these groups of animals receive sequential i.v. doses of alniditan (3, 10, 30 and 100 μg/kg) every 20 min. Fifteen minutes after each dose of alniditan, all haemodynamic variables are assessed again.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**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