Asapiprant

Cat. No.: HY-16763
CAS No.: 932372-01-5
Molecular Formula: C₂₄H₂₇N₃O₇S
Molecular Weight: 501.55
Target: Prostaglandin Receptor
Pathway: GPCR/G Protein
Storage: Powder -20°C 3 years
        4°C 2 years
        In solvent -80°C 6 months
        -20°C 1 month
Solubility: 10 mM in DMSO
* “<1 mg/mL” means slightly soluble or insoluble. “≥” means soluble, but saturation unknown.

PREPARING STOCK SOLUTIONS

<table>
<thead>
<tr>
<th>Volume Concentration (mM)</th>
<th>Mass Volume 1 mg</th>
<th>Mass Volume 5 mg</th>
<th>Mass Volume 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.9938 mL</td>
<td>9.9691 mL</td>
<td>19.9382 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3988 mL</td>
<td>1.9938 mL</td>
<td>3.9876 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1994 mL</td>
<td>0.9969 mL</td>
<td>1.9938 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description: Asapiprant is a potent and selective DP₁ receptor antagonist with a $K_i$ of 0.44 nM.

IC₅₀ & Target: DP/DP1 Receptor, $K_i$: 0.44 nM

In Vivo: Oral administration of Asapiprant to sheep at 1 and 3 mg/kg significantly (P<0.01) suppresses the increase in nasal resistance by 82% and 92%, respectively. Oral administration of Asapiprant to sheep at 5 mg/kg suppresses Prostaglandin (PG) D₂ (PGD₂)-induced nasal resistance by 86%. When orally administered 1 h before the antigen challenge in pigs, Asapiprant (3, 10, and 30 mg/kg) suppresses immediate airway response (IAR) by 52%, 57%, and 96%, and late airway response (LAR) by 67%, 50%, and 79%, respectively. Orally administered with Asapiprant (5 mg/kg) for 4 days, the Asapiprant significantly (P<0.01) suppresses antigen-induced nasal resistance by 73% in sheep. Treatment with 3 and 30 mg/kg of Asapiprant in pigs significantly (P<0.01) suppresses nasal secretion by 53% and 72%, respectively. Treatment with Asapiprant in rats at 10 mg/kg significantly (P<0.05) reduces airway hyperresponsiveness (AHR), infiltration of inflammatory cells, and mucin production in bronchoalveolar lavage fluid (BALF), although treatment with Asapiprant at 0.1 mg/kg does not have a significant effect on any responses.[1]
Male Hartley guinea pigs (300 to 400 g) and male brown Norway rats (240 to 400 g) are used in this study. The guinea pigs and rats are housed in an air-conditioned room at 20 to 26°C with a relative humidity of 30 to 70%, and are fed standard laboratory chow and given water ad libitum. Female sheep (32 to 46 kg) naturally sensitive to ascaris suum antigen are also used. After the oral administration of Asapiprant to rats, guinea pigs, and sheep at 10 mg/kg in suspension with 0.5% methylcellulose solution, the plasma concentrations of the drugs are measured\(^{[1]}\).

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.

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