**Roxatidine Acetate Hydrochloride**

**Cat. No.:** HY-B0305A  
**CAS No.:** 93793-83-0  
**Molecular Formula:** C₁₉H₂₉ClN₂O₄  
**Molecular Weight:** 384.9  
**Target:** Histamine Receptor  
**Pathway:** GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling  
**Storage:** 4°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: 50 mg/mL (129.90 mM; Need ultrasonic)  
H₂O: ≥ 50 mg/mL (129.90 mM)  
* “≥” means soluble, but saturation unknown.

### Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 mM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.5981 mL</td>
<td>12.9904 mL</td>
<td>25.9808 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5196 mL</td>
<td>2.5981 mL</td>
<td>5.1962 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.2598 mL</td>
<td>1.2990 mL</td>
<td>2.5981 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: 140 mg/mL (363.73 mM); Clear solution; Need ultrasonic

**BIOLOGICAL ACTIVITY**

**Description**  
Roxatidine Acetate Hydrochloride is a potent, selective, competitive and orally active histamine H₂-receptor antagonist. Roxatidine Acetate Hydrochloride has antisecretory potency against gastric acid secretion. Roxatidine Acetate Hydrochloride can also suppress inflammatory responses and can be used for gastric and duodenal ulcers research. Roxatidine Acetate Hydrochloride has antitumor activity[1][2][3].

**IC₅₀ & Target**  
H₂ Receptor

**In Vitro**  
Roxatidine Acetate Hydrochloride (0-120 μM, 1 h) suppresses inflammatory responses via inhibition of NF-κB and p38 MAPK activation in LPS-induced RAW 264.7 macrophages[2].  
Roxatidine Acetate Hydrochloride (6.25 μM, 12.5 μM, and 25 μM; pre-treatment for 30 min) suppresses the PMACI-induced activation of p38 MAPK, but does not affect the phosphorylation of ERK or JNK. The total ERK 1/2, JNK, and p38 MAPK levels are unaffected by roxatidine in human mast-cells-1 (HMC-1) cells[4].
**Western Blot Analysis**

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>RAW 264.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>40, 80, and 120 μM</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>1 h</td>
</tr>
<tr>
<td>Result:</td>
<td>Suppressed LPS-induced PGE2, NO, and histamine production and COX-2, iNOS, and HDC expressions. Inhibited expressions of TNF-α, IL-1β, IL-6, and VEGF-1. Concentration-dependently attenuated the nuclear translocations of p65 and p50. Inhibited LPS-induced phosphorylation of p38 MAP kinase. Significantly down-regulated the LPS-induced productions of NO and PGE2 (prostaglandin E2).</td>
</tr>
</tbody>
</table>

**In Vivo**

Roxatidine Acetate Hydrochloride (0-300 mg/kg; p.o.; 26 days) suppressed growth of Colon 38 tumor implants in mice[3]. Roxatidine Acetate Hydrochloride (oral gavage; 20 mg/kg; single dose) inhibits Compound 48/80-increased TNF-α, IL-6, and IL-1β production and mRNA expression. Additionally, Roxatidine Acetate Hydrochloride decreases the compound 48/80-induced degradation of procaspase-1 and appearance of the corresponding cleaved bands in mice[4].

**REFERENCES**


Caution: Product has not been fully validated for medical applications. For research use only.

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