Sulfacetamide Sodium

Cat. No.: HY-B0576
CAS No.: 127-56-0
Molecular Formula: C₈H₉N₂NaO₃S
Molecular Weight: 236.22
Target: Bacterial
Pathway: Anti-infection
Storage: 4°C, protect from light, stored under nitrogen

Solvent & Solubility

In Vitro

H₂O : ≥ 50 mg/mL (211.67 mM)
DMSO : 33.33 mg/mL (141.10 mM; Need ultrasonic)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>4.2333 mL</td>
<td>21.1667 mL</td>
<td>42.3334 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.8467 mL</td>
<td>4.2333 mL</td>
<td>8.4667 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.4233 mL</td>
<td>2.1167 mL</td>
<td>4.2333 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 >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.58 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (10.58 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sulfacetamide Sodium is an anti-infective agent that is used topically to treat skin infections and orally for urinary tract infections. Target: Antibacterial Sulfacetamide is a sulfonamide antibiotic. Sulfacetamide is able to inhibit the growth of all isolated strains. Depending on the type of bacteria concentrations of 0.006 up to 6.4% sodium sulfacetamide proved to be effective. Simultaneously, all patients were treated with sulfacetamide containing ointment and/or eye drops 4 times daily for maximum of 14 days. With swabs taken at intervals of 7 and 14 days no bacterial growth was detected. Sulfacetamide 10% topical lotion, sold under the brand name Klaron or Ovace, is
approved for the treatment of acne and seborrheic dermatitis. Sulfacetamide has been investigated for use in the treatment of pityriasis versicolor and rosacea. It may also have anti-inflammatory properties when used to treat blepharitis or conjunctivitis. It is believed to work by limiting the presence of folic acid which bacteria need to survive. It has been suggested that sulfacetamide may also serve as a treatment for mild forms of hidradenitis suppurativa. Sulfacetamide has antibacterial activity and is used to control acne. Some research indicates that sulfacetamide derivatives may act as antifungals by an CYP51A1-independent mechanism [1-4].

REFERENCES


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

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