**Sivelestat sodium**

**Cat. No.:** HY-17443A  
**CAS No.:** 150374-95-1  
**Molecular Formula:** C₂₀H₂₁N₂NaO₇S  
**Molecular Weight:** 456.44  
**Target:** Elastase  
**Pathway:** Metabolic Enzyme/Protease  
**Storage:** Please store the product under the recommended conditions in the COA.

### Solvent & Solubility

#### In Vitro

10 mM in DMSO

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.1909 mL</td>
<td>10.9543 mL</td>
<td>21.9087 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4382 mL</td>
<td>2.1909 mL</td>
<td>4.3817 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2191 mL</td>
<td>1.0954 mL</td>
<td>2.1909 mL</td>
<td></td>
</tr>
</tbody>
</table>

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

### BIOLOGICAL ACTIVITY

**Description**

Sivelestat sodium (ONO-5046; LY544349; E1546) is a competitive inhibitor of human neutrophil elastase (IC₅₀ = 44 nM; Ki=200 nM); also inhibited leukocyte elastase obtained from rabbit, rat, hamster and mouse. IC₅₀ value: 44 nM  

[1] Target: neutrophil elastase  
ONO-5046 did not inhibit trypsin, thrombin, plasmin, plasma kallikrein, pancreas kallikrein, chymotrypsin and cathepsin G even at 100 microM.  

In vivo studies, ONO-5046 suppressed lung hemorrhage in hamster (ID₅₀ = 82 micrograms/kg) by intratracheal administration and increase of skin capillary permeability in guinea pig (ID₅₀ = 9.6 mg/kg) by intravenous administration, both of which were induced by human neutrophil elastase [1]. Sivelestat sodium hydrate is an anti-neutrophil elastase inhibitor and may be one of the treatment options for acute respiratory failure due to pneumocystis pneumonia in AIDS patients [2].

### REFERENCES
