

**Product Name:** Sivelestat sodium salt

**Catalog No.:** 3535

**Batch No.:** 3

CAS Number: 150374-95-1

IUPAC Name: *N*-[2-[[4-[(2,2-Dimethylpropanoyl)oxy]phenyl]sulfonyl]amino]benzoyl]glycine sodium salt

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>20</sub>H<sub>21</sub>N<sub>2</sub>NaO<sub>7</sub>S.4H<sub>2</sub>O

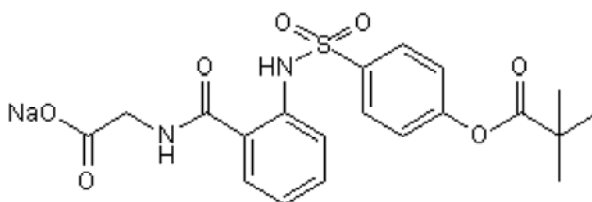
**Batch Molecular Weight:** 528.5

**Physical Appearance:** White solid

**Solubility:** DMSO to 50 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.8% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	45.45	5.53	5.3
Found	45.63	5.45	5.34

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IUPAC Name: *N*-[2-[[4-[(2,2-Dimethylpropanoyl)oxy]phenyl)sulfonyl]amino]benzoyl]glycine sodium salt

**Description:**

Sivelestat sodium salt is a selective leukocyte elastase inhibitor ( $IC_{50} = 44$  nM) that displays no activity at a range of other proteases. Inhibits NF- $\kappa$ B activation and LTB<sub>4</sub>-induced neutrophil transmigration in vitro. Significantly attenuates ischemia-induced spinal cord injury, decreases serum cytokine levels and reduces acute inflammatory lung injury in vivo.

**Physical and Chemical Properties:**

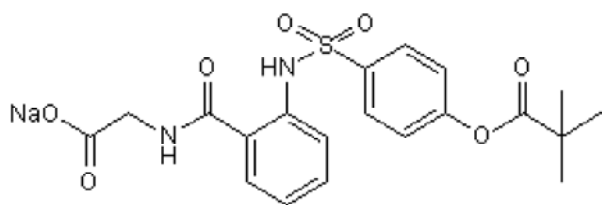
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Batch Molecular Weight: 528.5

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

DMSO to 50 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Hagiwara et al** (2009) Neutrophil elastase inhibitor (sivelestat) reduces the levels of inflammatory mediators by inhibiting NF- $\kappa$ B. *Inflamm.Res.* **58** 198. PMID: 19169649.

**Iwamoto et al** (2009) Protective effect of sivelestat sodium hydrate (ONO-5046) on ischemic spinal cord injury. *Interact.Cardiovasc.Thorac.Surg.* **8** 606. PMID: 19289399.

**Young et al** (2007) Role of neutrophil elastase in LTB<sub>4</sub>-induced neutrophil transmigration in vivo assessed with a specific inhibitor and neutrophil elastase deficient mice. *Br.J.Pharmacol.* **151** 628. PMID: 17471175.

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