

Product Name: Sivelestat sodium salt

Catalog No.: 3535

Batch No.: 4

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: C₂₀H₂₁N₂NaO₇S.3.75H₂O

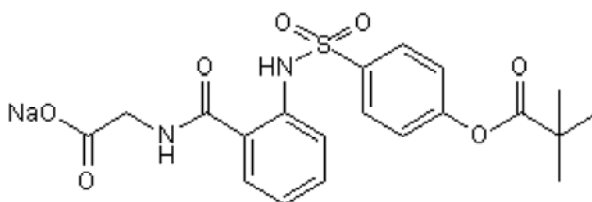
Batch Molecular Weight: 524

Physical Appearance: White solid

Solubility: DMSO to 50 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.9% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	45.84	5.48	5.35
Found	45.59	5.49	5.24

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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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- κ B activation and LTB₄-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:

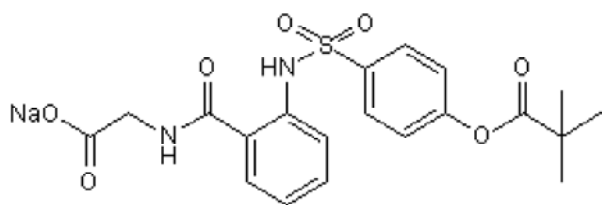
Batch Molecular Formula: C₂₀H₂₁N₂NaO₇S.3.75H₂O

Batch Molecular Weight: 524

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- κ 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 LTB₄-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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