

Certificate of Analysis

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Product Name: NPE-caged-proton

Catalog No.: 3512

Batch No.: 2

CAS Number: 1186195-63-0

IUPAC Name: 1-(2-Nitrophenyl)ethyl sulfate sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₈NNaO₆S.H₂O

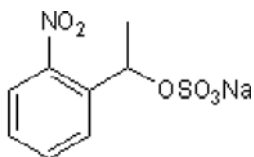
Batch Molecular Weight: 287.23

Physical Appearance: Off White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	33.45	3.51	4.88
Found	33.59	3.44	4.89

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

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CAS Number: 1186195-63-0

IUPAC Name: 1-(2-Nitrophenyl)ethyl sulfate sodium salt

Description:

NPE-caged-proton is a 1-(2-nitrophenyl)ethyl caged proton that releases a proton and a sulfate ion upon photolysis at 350 - 355 nm. Generates rapid acidifications (pH jumps) down to pH 2.

Physical and Chemical Properties:

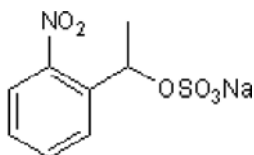
Batch Molecular Formula: C₈H₉NNaO₆S.H₂O

Batch Molecular Weight: 287.23

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM

DMSO to 100 mM

CAUTION: This compound is hygroscopic and has been packed under inert atmosphere.

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:

Peralvarez-Marin *et al* (2008) Time-resolved infrared spectroscopy of pH-induced aggregation of the Alzheimer Aβ₁₋₂₈ peptide. *J.Mol.Biol.* **379** 589. PMID: 18462754.

Abbruzzetti *et al* (2005) Kinetics of proton release after flash photolysis of 1-(2-Nitrophenyl)ethyl sulfate (caged sulfate) in aqueous solution. *J.Am.Chem.Soc.* **127** 9865. PMID: 15998092.

Barth and Corrie (2002) Characterization of a new caged proton capable of inducing large pH jumps. *Biophys.J.* **83** 2864. PMID: 12414718.

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