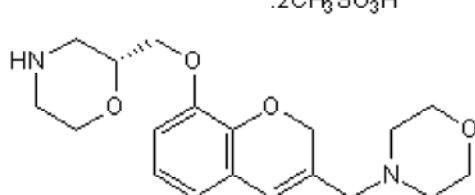


**Certificate of Analysis**[www.tocris.com](http://www.tocris.com)**Product Name:** NAS-181**Catalog No.:** 1413**Batch No.:** 6

CAS Number: 1217474-40-2

IUPAC Name: (2*R*)-2-[[[3-(4-Morpholinylmethyl)-2*H*-1-benzopyran-8-yl]oxy]methyl]morpholine dimethanesulfonate**1. PHYSICAL AND CHEMICAL PROPERTIES****Batch Molecular Formula:** C<sub>19</sub>H<sub>26</sub>N<sub>2</sub>O<sub>4</sub>.2CH<sub>3</sub>SO<sub>3</sub>H.H<sub>2</sub>O**Batch Molecular Weight:** 556.65**Physical Appearance:** Beige solid**Solubility:** water to 100 mM  
DMSO to 100 mM**Storage:** Store at -20°C**Batch Molecular Structure:** .2CH<sub>3</sub>SO<sub>3</sub>H**2. ANALYTICAL DATA****HPLC:** Shows 97.0% purity**<sup>1</sup>H NMR:** Consistent with structure**Mass Spectrum:** Consistent with structure**Optical Rotation:** [α]<sub>D</sub> = -4.5 (Concentration = 1.1, Solvent = Methanol)**Microanalysis:** Carbon Hydrogen Nitrogen

Theoretical 45.31 6.52 5.03

Found 45.22 6.54 5.07

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

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## Product Information

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**Product Name:** NAS-181

**Catalog No.:** 1413

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**IUPAC Name:** (2R)-2-[[[3-(4-Morpholinylmethyl)-2H-1-benzopyran-8-yl]oxy]methyl]morpholine dimethanesulfonate

### Description:

Potent, selective antagonist at the rat 5-HT<sub>1B</sub> receptor ( $K_i = 47$  nM). Increases synthesis and metabolism of 5-HT in the brain following systemic administration and improves passive avoidance retention performance in vivo. Increases subthalamic nucleus-triggered complex EPSCs and burst firing in SNr GABA neurons

### Physical and Chemical Properties:

Batch Molecular Formula: C<sub>19</sub>H<sub>26</sub>N<sub>2</sub>O<sub>4</sub>.2CH<sub>3</sub>SO<sub>3</sub>H.H<sub>2</sub>O

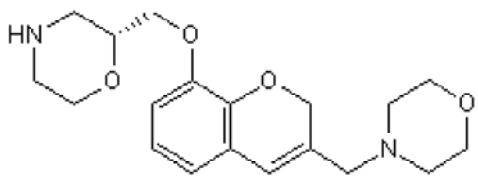
Batch Molecular Weight: 556.65

Physical Appearance: Beige solid

**Minimum Purity:** ≥97%

### Batch Molecular Structure:

.2CH<sub>3</sub>SO<sub>3</sub>H



### References:

Ding *et al* (2013) Presynaptic serotonergic gating of the subthalamic glutamatergic projection. *J.Neurosci.* **33** 4875. PMID: 23486958.

Eriksson *et al* (2008) Blockade of 5-HT<sub>1B</sub> receptors facilitates contextual aversive learning in mice by disinhibition of cholinergic and glutamatergic neurotransmission. *Neuropharmacology* **54** 1041. PMID: 18394658.

Stenfors *et al* (2000) Enhanced 5-HT metabolism and synthesis rate by the new selective r5-HT<sub>1B</sub> receptor antagonist, NAS-181 in the rat brain. *Neuropharmacology* **39** 553. PMID: 10728876.

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

### Solubility & Usage Info:

water to 100 mM  
DMSO to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival. Solutions should be made up as soon as the vial is opened.

### 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.

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