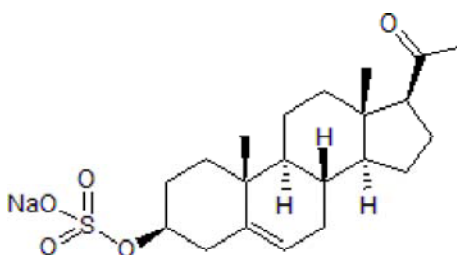


Product Name: Pregnenolone sulfate sodium salt
CAS Number: 1852-38-6
IUPAC Name: (3 β)-3-(Sulfooxy)-pregn-5-en-20-one sodium salt

Catalog No.: 5376 **Batch No.:** 8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₁H₃₁NaO₅S.1½H₂O
Batch Molecular Weight: 445.54
Physical Appearance: White solid
Solubility: DMSO to 50 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	56.61	7.69	0
Found	56.21	7.63	0.05

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

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8

CAS Number: 1852-38-6

IUPAC Name: (3β)-3-(Sulfooxy)-pregn-5-en-20-one sodium salt

Description:

Pregnenolone sulfate sodium salt is a highly potent neurosteroid with multiple actions. Enhances intracellular Ca²⁺ upon NMDA receptor-mediated synaptic activity (EC₅₀ ~ 2 pM) and potentiates NMDA responses. Inhibitor at GABA_A receptors (IC₅₀ values are 0.4 to >300 μM, depending on specific subunit conformation). Activates CREB phosphorylation, augments LTP and cognitive behavior in rat memory models. Also activates TRPM3 channels.

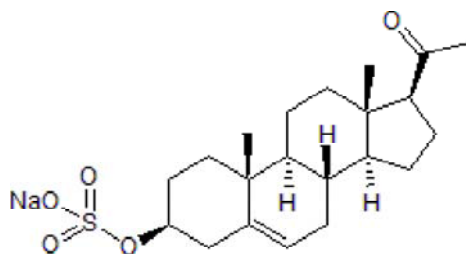
Physical and Chemical Properties:

Batch Molecular Formula: C₂₁H₃₁NaO₅S.1½H₂O

Batch Molecular Weight: 445.54

Physical Appearance: White solid

Batch Molecular Structure:



Storage: Store at +4°C

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:

Seljeset et al (2018) Probing GABA_A receptors with inhibitory neurosteroids. *Neuropharmacology* **136** 23. PMID: 29447845.

Smith et al (2014) A role for picomolar concentrations of pregnenolone sulfate in synaptic activity-dependent Ca²⁺ signaling and CREB activation. *Mol.Pharmacol.* **86** 390. PMID: 25057049.

Majeed et al (2010) Cis-isomerism and other chemical requirements of steroidal agonists and partial agonists acting at TRPM3 channels. *Br.J.Pharmacol.* **161** 430. PMID: 20735426.

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