

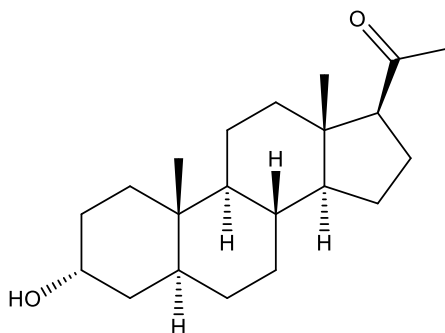
Catalog # 10-3489

Allopregnanolone

CAS# 516-54-1

(3 α ,5 α)-3-Hydroxy-pregnan-20-one; (3 α ,5 α)-Tetrahydroprogesterone; 3-OH-DHP

Lot # X109504



Endogenous neurosteroid which acts as a positive allosteric modulator of GABA_A receptors.^{1,2} Recently FDA approved (Brexanolone) for postpartum depression.³ Inhibits TLR4 receptor activation and inflammatory signaling in macrophages and brain.⁴ Inhibits glutamate release⁵ and displays neuroprotective effects in various animal models⁶.

- 1) Belelli and Lambert (2005), *Neurosteroids: endogenous regulators of the GABA(A) receptor*; Nat. Rev. Neurosci., **6** 565
- 2) Reddy *et al.* (2010), *Neurosteroids: endogenous role in the human brain and therapeutic potentials*; Prog. Brain Res., **186** 113
- 3) Frieder *et al.* (2019), *Pharmacotherapy of Postpartum Depression: Current Approaches and Novel Drug Development*; CNS Drugs, **33** 265
- 4) Balan *et al.* (2019), *Endogenous Neurosteroid (3 α ,5 α)-3-Hydroxypregnan-20-one Inhibits Toll-like-4 Receptor Activation and Proinflammatory Signaling in Macrophages and Brain*; Sci. Rep., **9** 1220
- 5) Chang *et al.* (2019), *Neurosteroid allopregnanolone inhibits glutamate release from rat cerebrocortical nerve terminals*; Synapse, **73** e22076
- 6) Cho *et al.* (2018), *Increased Superoxide Dismutase 2 by Allopregnanolone Ameliorates ROS-Mediated Neuronal Death in Mice with Pilocarpine-Induced Status Epilepticus*; Neurochem. Res., **43** 1464

PHYSICAL DATA

Molecular Weight:	318.49
Molecular Formula:	C ₂₁ H ₃₄ O ₂
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 32 mg/ml) or Ethanol (up to 32 mg/ml)
Physical Description:	White or off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 1 month.

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