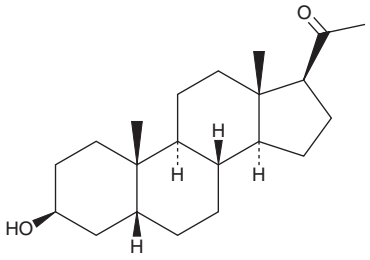
PRODUCT INFORMATION

Epipregnanolone

Item No. 34295

CAS Registry No.: 128-21-2
Formal Name: (5β)-3β-hydroxy-pregnan-20-one
Synonyms: NSC 21450, 5β-Pregnan-3β-ol-20-one
MF: $C_{21}H_{34}O_2$
FW: 318.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Epipregnanolone is supplied as a solid. A stock solution may be made by dissolving the epipregnanolone in the solvent of choice, which should be purged with an inert gas. Epipregnanolone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of epipregnanolone in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Epipregnanolone is a neurosteroid and an active metabolite of the steroid hormone pregnenolone (Item No. 19864).[1] It is enzymatically formed from pregnenolone *via* the intermediates progesterone (Item No. 15876) and 5β-dihydroprogesterone in the placenta.[2] Epipregnanolone inhibits spontaneous contractions in myometrial strips isolated from at-term pregnant women (IC_{50} = 156 µM).[3] Epipregnanolone (10 and 20 mg/kg) decreases operant alcohol self-administration in rats.[4] Maternal plasma levels of epipregnanolone increase over the duration of pregnancy.[2]

References

1. Prince, R.J. and Simmonds, M.A. 5β-pregnan-3β-ol-20-one, a specific antagonist at the neurosteroid site of the $GABA_A$ receptor-complex. *Neurosci. Lett.* **135(2)**, 273-275 (1992).
2. Hill, M., Cibula, D., Havlíkova, H., *et al.* Circulating levels of pregnanolone isomers during the third trimester of human pregnancy. *J. Steroid Biochem. Mol. Biol.* **105(1-5)**, 166-175 (2007).
3. Perusquía, M. and Jasso-Kamel, J. Influence of 5α- and 5β-reduced progestins on the contractility of isolated human myometrium at term. *Life Sci.* **68(26)**, 2933-2944 (2001).
4. O'Dell, L.E., Purdy, R.H., Covey, D.F., *et al.* Epipregnanolone and a novel synthetic neuroactive steroid reduce alcohol self-administration in rats. *Pharmacol. Biochem. Behav.* **81(3)**, 543-550 (2005).

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