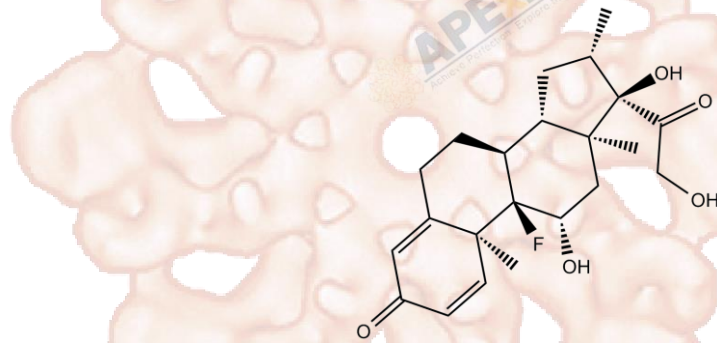


Product Data Sheet

Betamethasone

Cat. No.:	B1896
CAS No.:	378-44-9
Formula:	C ₂₂ H ₂₉ FO ₅
M.Wt:	392.46
Synonyms:	
Target:	GPCR/G protein
Pathway:	Glucocorticoid Receptor
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥19.6 mg/mL in DMSO; ≥4.37 mg/mL in EtOH with ultrasonic

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	2.5480 mL	12.7402 mL	25.4803 mL
	5 mM	0.5096 mL	2.5480 mL	5.0961 mL
	10 mM	0.2548 mL	1.2740 mL	2.5480 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

Glucocorticoid receptor agonist

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	Human astrocytoma
Preparation method:	The solubility of this compound in DMSO is >19.6 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	10 µg/ml

	Applications:	Bexamethasone (1.3-50 µg/ml) decreased cloning efficiency and colony size in cultured human astrocytoma. In MRC5 human diploid fibroblasts, betamethasone (8 µg/ml) increased cloning efficiency by two-fold. Betamethasone (2-16 µg/ml) did not affect colony size.
In Vivo	Animal experiment	
	Animal models:	Pregnant rabbits, Pregnant ewes
	Dosage form:	0.5 mg/kg
	Applications:	Pregnant rabbits were injected with either 0.8 mg of betamethasone on days 24 and 25 of gestation and delivered by cesarean section on day 26. Bexamethasone significantly reduced the weight of fetuses and fetal brain, lungs, liver, and placenta. In pregnant ewes, BET (0.5 mg/kg) decreased fetal (121–146 dG) and placental (121 dG) weights. Maternal plasma oPL levels in controls increased across gestation; fetal plasma oPL levels decreased. BNCs were reduced by 24% to 47% after BET. Placental oPL protein levels, maternal and fetal plasma oPL levels were also reduced after BET injections, but recovered to values that were not different to controls near term. BET (0.5 mg/kg) disrupted the normal distribution of BNCs within the placentome.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

- [1]. Guner M, Freshney R I, Morgan D, et al. Effects of dexamethasone and betamethasone on in vitro cultures from human astrocytoma[J]. British journal of cancer, 1977, 35(4): 439.
- [2]. Barrada M I, Blomquist C H, Kotts C. The effects of betamethasone on fetal development in the rabbit[J]. American journal of obstetrics and gynecology, 1980, 136(2): 234-238.
- [3]. Braun T, Li S, Moss T J M, et al. Maternal betamethasone administration reduces binucleate cell number and placental lactogen in sheep[J]. Journal of Endocrinology, 2007, 194(2): 337-347.

Caution

FOR RESEARCH PURPOSES ONLY.



NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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