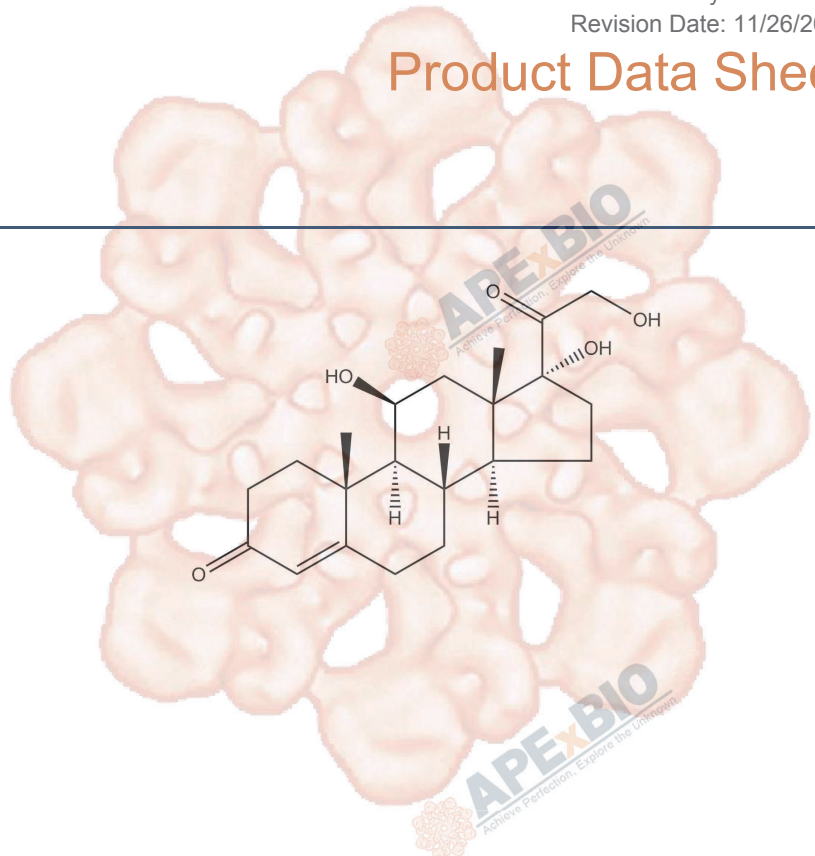


# Product Data Sheet

## Hydrocortisone

<b>Cat. No.:</b>	B1951
<b>CAS No.:</b>	50-23-7
<b>Formula:</b>	C <sub>21</sub> H <sub>30</sub> O <sub>5</sub>
<b>M.Wt:</b>	362.46
<b>Synonyms:</b>	
<b>Target:</b>	GPCR/G protein
<b>Pathway:</b>	Glucocorticoid Receptor
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

≥ 13.3mg/mL in DMSO

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		<b>1 mM</b>	2.7589 mL	13.7946 mL	27.5893 mL
		<b>5 mM</b>	0.5518 mL	2.7589 mL	5.5179 mL
		<b>10 mM</b>	0.2759 mL	1.3795 mL	2.7589 mL

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

### Biological Activity

Shortsummary	steroid hormone or glucocorticoid	
IC <sub>50</sub> & Target		
In Vitro	<b>Cell Viability Assay</b>	
	Cell Line:	human lung microvascular endothelial cells
	Preparation method:	The solubility of this compound in DMSO is >13.3mg/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:	4 or 6 μM; 16 h
	Applications:	In human lung microvascular endothelial cells, Hydrocortisone (HC) induced a

concentration-dependent but biologically minor barrier enhancing and protective effect. The combination of HC (4  $\mu$ M) and ascorbic acid (VitC) (1000  $\mu$ M) pre- or post-treatment significantly reversed the LPS-induced barrier dysfunction.

#### Animal experiment

**Animal models:** 6-hydroxydopamine (6-OHDA)-induced Parkinson's disease (PD) mouse models

**Dosage form:** 0.4 mg/kg; intraperitoneal injection, 7 consecutive days

**Applications:** In Parkinson's disease (PD) mouse models, Hydrocortisone caused approximate two-fold increase of parkin expression in selected brain subregions (striatum, ventral midbrain, and cerebellum), which was responsible for cell survival against oxidative stress.. Hydrocortisone also increased CREB expression. Hydrocortisone pretreatment markedly enhanced dopaminergic neuronal survival against 6-OHDA intoxication.

**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.

In Vivo

## Product Citations

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

- [1]. Barabutis N1, Khangoora V2, Marik PE2, et al. Hydrocortisone and Ascorbic Acid synergistically prevent and repair LPS- induced pulmonary endothelial barrier dysfunction. Chest. 2017 Jul 21. pii: S0012-3692(17)31276-X.
- [2]. Ham S1, Lee Y1,2,3, Jo M1, et al. Hydrocortisone-induced parkin prevents dopaminergic cell death via CREB pathway in Parkinson's disease model. Sci Rep. 2017 Apr 3;7(1):525.

## 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 APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term 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.



## APEX BIO Technology

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