

Store at  
-20°C

# Dexamethasone



#14776

5 mg

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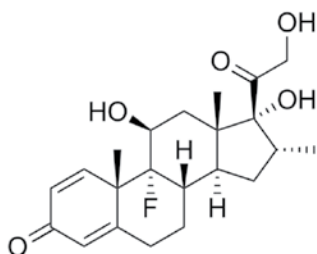
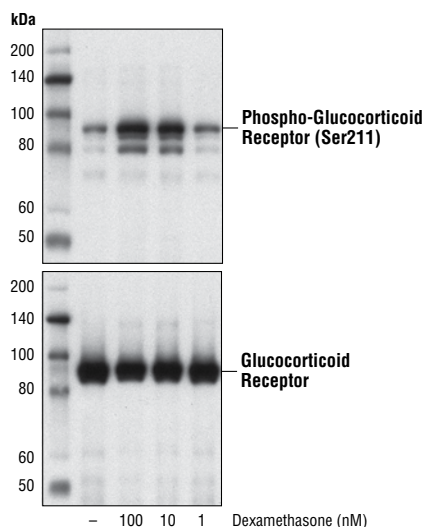
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**For Research Use Only. Not For Use In Diagnostic Procedures.**

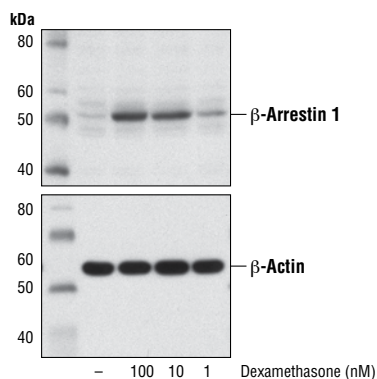
**Background:** Dexamethasone is a synthetic glucocorticoid that binds to the human glucocorticoid receptor (GR). Treatment of cells with dexamethasone leads to nuclear translocation and activation of GR. This elicits anti-inflammatory, cellular proliferation, and metabolic responses via GR-mediated transcriptional activation or repression of target genes (1-4). Research studies show that dexamethasone inhibits dendritic cell differentiation and maturation (5). The inhibition of nitric oxide synthase by dexamethasone has also been observed (6).

**Background References:**

- (1) Wang, Z. et al. (2002) *J Biol Chem* 277, 26573-80.
- (2) Matthews, L. et al. (2009) *Endocrinology* 150, 75-86.
- (3) Cole, T.J. (2006) *Biotechnol Annu Rev* 12, 269-300.
- (4) Beck, I.M. et al. (2009) *Endocr Rev* 30, 830-82.
- (5) Matasić, R. et al. (1999) *J Leukoc Biol* 66, 909-14.
- (6) Moncada, S. and Palmer, R.M. (1991) *Trends Pharmacol Sci* 12, 130-1.

**Molecular Formula:** C<sub>22</sub>H<sub>29</sub>FO<sub>5</sub>**Molecular Weight:** 392.5 g/mol**Solubility:** Soluble in DMSO at 40 mg/ml.**Purity:** >98%

Western blot analysis of extracts from HeLa cells, serum-starved overnight and untreated (-) or treated with Dexamethasone (1 hr) at the indicated concentrations, using Phospho-Glucocorticoid Receptor (Ser211) Antibody #4161 (upper) and Glucocorticoid Receptor (D6H2L) XP<sup>®</sup> Rabbit mAb #12041 (lower).



Western blot analysis of extracts from A549 cells, untreated (-) or treated with Dexamethasone (24 hr) at the indicated concentrations, using beta-Arrestin 1 (D803J) Rabbit mAb #12697 (upper) and beta-Actin (D6A8) Rabbit mAb #8457 (lower).

**Storage:** Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

**Directions for Use:** Dexamethasone is supplied as a lyophilized powder. For a 10 mM stock, reconstitute the 5 mg in 1.27 ml DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used at 10-1,000 nM for 1-24 hr.

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