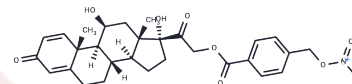


NO-prednisolone

Chemical Properties

CAS No. : 327610-87-7
 Formula: C₂₉H₃₃NO₉
 Molecular Weight: 539.57
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	NO-prednisolone (NCX-1015) is a compound that effectively stimulates the production of IL-10 in vivo. It is a Prednisolone derivative that releases nitric oxide (NO).
Targets(IC50)	IL Receptor, Interleukin
In vitro	'NO-prednisolone (NCX-1015) demonstrates superior effectiveness compared to Prednisolone in reducing inflammation, inhibiting the generation of cytokines and chemokines, and enhancing the expression of the steroid-sensitive cell-surface marker CD163 in human peripheral blood mononuclear cells.[1] Additionally, NO-prednisolone exhibits greater potency than Prednisolone in inducing CD163 cell surface expression. This heightened efficacy of NO-prednisolone, relative to the parent molecule Prednisolone, is also observed in the inhibition of IL-1 β production induced by LPS (lipopolysaccharide).[2]'
In vivo	In vivo, NO-prednisolone (NCX-1015) potently stimulates IL-10 production, suggesting that the NO steroid induces a regulatory subset of T cells that negatively modulates intestinal inflammation. The two doses of NO-prednisolone tested, 0.5 and 5 mg/kg/day effectively attenuate the severity of the wasting syndrome, ameliorate the colitis score, and reduce the colonic myeloperoxidase (MPO) activity. NO-prednisolone administration also reduces the colonic mRNA and protein content of tumor necrosis factor- α , IL-12, and IFN- γ . NO-prednisolone also reduces the expression of inducible NO synthase and cyclooxygenase-2. In a chronic model of granulomatous tissue inflammation, administration of NCX-1015 (13.9 μ mol/kg) can effectively reduce the weight of dry granulomas, while exhibiting a lower anti-angiogenic effect.[1]

Solubility Information

Solubility	DMSO: 40 mg/mL (74.13 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8533 mL	9.2666 mL	18.5333 mL
5 mM	0.3707 mL	1.8533 mL	3.7067 mL
10 mM	0.1853 mL	0.9267 mL	1.8533 mL
50 mM	0.0371 mL	0.1853 mL	0.3707 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Fiorucci S, et al. NCX-1015, a nitric-oxide derivative of prednisolone, enhances regulatory T cells in the lamina propria and protects against 2,4,6-trinitrobenzene sulfonic acid-induced colitis in mice. *Proc Natl Acad Sci U S A.* 2002;99(24):15770-15775.

Paul-Clark M, et al. 21-NO-prednisolone is a novel nitric oxide-releasing derivative of prednisolone with enhanced anti-inflammatory properties. *Br J Pharmacol.* 2000;131(7):1345-1354.

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