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Produktinformation

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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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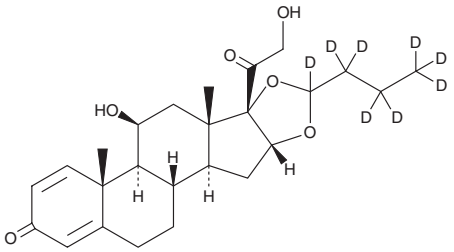
PRODUCT INFORMATION

Budesonide-d_8

Item No. 30046

CAS Registry No.:	1105542-94-6
Formal Name:	(11β,16α)-16,17-[butylidene-1,2,2,3,3,4,4,4-d_8-*bis*(oxy)]-11,21-dihydroxy-pregna-1,4-diene-3,20-dione
MF:	$C_{25}H_{26}D_8O_6$
FW:	438.6
Chemical Purity:	≥95% (Budesonide)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_8); ≤1% d_0
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Budesonide-d_8 is intended for use as an internal standard for the quantification of budesonide (Item No. 15407) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Budesonide-d_8 is supplied as a solid. A stock solution may be made by dissolving the budesonide-d_8 in the solvent of choice, which should be purged with an inert gas. Budesonide-d_8 is slightly soluble in organic solvents such as DMSO and dichloromethane.

Description

Budesonide is a glucocorticoid and an agonist of glucocorticoid receptors (EC_{50} = 45.7 pM in a transactivation assay).[1] It is selective for glucocorticoid over mineralocorticoid receptors (EC_{50} = 7,620 pM). Budesonide inhibits LPS-induced TNF-α release from human peripheral blood mononuclear cells (PBMCs; IC_{50} = 0.96 nM).[2] It reduces levels of IL-1β and eotaxin in the lungs and the number of eosinophils and neutrophils in bronchoalveolar lavage fluid (BALF) in a rat model of ovalbumin-induced airway inflammation when administered at a dose of 3 mg/kg.[3] Intracolonic administration of budesonide decreases colon wet weight and colonic myeloperoxidase (MPO) activity in a rat model of oxazolone-induced colitis.[4] Formulations containing budesonide have been used in the treatment of Crohn's disease, ulcerative colitis, allergic rhinitis, and asthma.

References

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2. Millan, D.S., Ballard, S.A., Chunn, S., *et al*. Design and synthesis of long acting inhaled corticosteroids for the treatment of asthma. *Bioorg. Med. Chem. Lett.* **21(19)**, 5826-5830 (2011).
3. Birrell, M.A., Hardaker, E., Wong, S., *et al*. IκB kinase-2 inhibitor blocks inflammation in human airway smooth muscle and a rat model of asthma. *Am. J. Respir. Crit. Care Med.* **172(8)**, 962-971 (2005).
4. Ekström, G.M. Oxazolone-induced colitis in rats: effects of budesonide, cyclosporin A, and 5-aminosalicylic acid. *Scand. J. Gastroenterol.* **33(2)**, 174-179 (1998).

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