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# Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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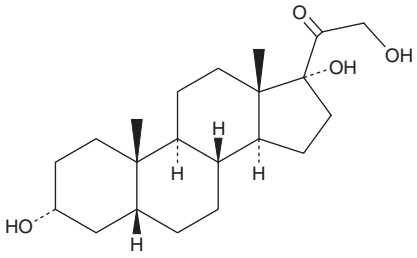
# PRODUCT INFORMATION

## Tetrahydro-11-deoxy Cortisol

*Item No. 26501*

**CAS Registry No.:** 68-60-0
**Formal Name:** 5β-3α,17,21-trihydroxy-pregnan-20-one
**Synonyms:** NSC 53901, 5β-Pregnane-3α,17α,21-triol-20-one, Tetrahydrodeoxycortisol, THS
**MF:** $C_{21}H_{34}O_4$
**FW:** 350.5
**Purity:** ≥95%
**Supplied as:** A crystalline 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

Tetrahydro-11-deoxy cortisol (THS) is supplied as a crystalline solid. A stock solution may be made by dissolving the THS in the solvent of choice. THS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of THS in these solvents is approximately 30 mg/ml.

THS is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, THS should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. THS has a solubility of approximately 0.2 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

THS is the primary urinary metabolite of 11-deoxycortisol.[1,2] Urinary excretion of THS is elevated in patients with 11β-hydroxylase deficiency, a condition resulting from mutations in the cytochrome P450 (CYP) isoform CYP11B1. Urinary levels of THS are also elevated in patients with adrenocortical carcinoma (ACC) and adrenocortical adenoma (ACA) but are higher in patients with ACC compared to ACA.[2,3]

### References


1. Keavney, B., Mayosi, B., Gaukrodger, N., *et al.* Genetic variation at the locus encompassing 11-β hydroxylase and aldosterone synthase accounts for heritability in cortisol precursor (11-deoxycortisol) urinary metabolite excretion. *J. Clin. Endocrinol. Metab.* **90(2)**, 1072-1077 (2005).
2. Nguyen, H.-H., Eiden-Plach, A., Hannemann, F., *et al.* Phenotypic, metabolic, and molecular genetic characterization of six patients with congenital adrenal hyperplasia caused by novel mutations in the CYP11B1 gene. *J. Steroid Biochem. Mol. Biol.* **155(Pt A)**, 126-134 (2016).
3. Arlt, W., Biehl, M., Taylor, A.E., *et al.* Urine steroid metabolomics as a biomarker tool for detecting malignancy in adrenal tumors. *J. Clin. Endocrinol. Metab.* **96(12)**, 3775-3784 (2011).
4. Velikanova, L.I., Shafigullina, Z.R., Lisitsin, A.A., *et al.* Different types of urinary steroid profiling obtained by high-performance liquid chromatography and gas chromatography-mass spectrometry in patients with adrenocortical carcinoma. *Horm. Cancer* **7(5-6)**, 327-335 (2016).





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