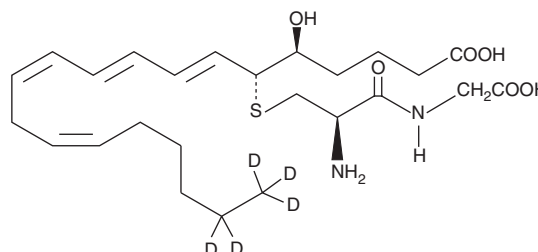


# PRODUCT INFORMATION



## Leukotriene D<sub>4</sub>-d<sub>5</sub> Item No. 10006199

**CAS Registry No.:** 1240398-17-7  
**Formal Name:** S-[(1R,2E,4E,6Z,9Z)-1-[(1S)-4-carboxy-1-hydroxybutyl]-2,4,6,9-pentadecatetraen-1-yl-14,14,15,15,15-d<sub>5</sub>]-L-cysteinyl-glycine  
**Synonym:** LTD<sub>4</sub>-d<sub>5</sub>  
**MF:** C<sub>25</sub>H<sub>35</sub>D<sub>5</sub>N<sub>2</sub>O<sub>6</sub>S  
**FW:** 501.7  
**Chemical Purity:** ≥97% (Leukotriene D<sub>4</sub>)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**UV/Vis.:** λ<sub>max</sub>: 280 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -80°C  
**Stability:** ≥1 year  
**Special Conditions:** Light sensitive



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

### Laboratory Procedures

Leukotriene D<sub>4</sub>-d<sub>5</sub> (LTD<sub>4</sub>-d<sub>5</sub>) is intended for use as an internal standard for the quantification of LTD<sub>4</sub> (Item No. 20310) 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).

LTD<sub>4</sub>-d<sub>5</sub> is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of LTD<sub>4</sub>-d<sub>5</sub> in these solvents is approximately 50 mg/ml.

### Description

Leukotriene D<sub>4</sub>-d<sub>5</sub> (LTD<sub>4</sub>-d<sub>5</sub>) is intended for use as an internal standard for the quantification of LTD<sub>4</sub> (Item No. 20310) by GC- or LC-MS. LTD<sub>4</sub> is an active metabolite of LTC<sub>4</sub> (Item Nos. 20210 | 10007241) and a constituent of slow-reacting substance of anaphylaxis (SRS-A).<sup>1,2</sup> It is formed via metabolism of LTC<sub>4</sub> by γ-glutamyl transpeptidase. Like LTC<sub>4</sub>, LTD<sub>4</sub> (0.01-0.1 pM) induces contractions in isolated guinea pig parenchymal strips and tracheal spirals.<sup>3</sup> *In vivo*, LTD<sub>4</sub> increases insufflation pressure, a marker of bronchoconstriction, in anesthetized guinea pigs by 100% when administered at a dose of 89 pmol per animal.<sup>4</sup> It also increases vascular permeability in guinea pig skin when administered intradermally at a dose of 0.1 pmol per animal.

### References

- Örning, L., Hammarström, S., and Samuelsson, B. *Proc. Natl. Acad. Sci. USA* **77**(4), 2014-2017 (1980).
- Hammarström, S., Örning, L., and Bernström, K. *Mol. Cell Biochem.* **69**(1), 7-16 (1985).
- Lefer, A.M. *Biochem. Pharmacol.* **35**(2), 123-127 (1986).
- Hedqvist, P., Dahlén, S.E., Gustafsson, L., et al. *Acta Physiol. Scand.* **110**(3), 331-333 (1980).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM