



# SZABO SCANDIC

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## Produktinformation



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### SZABO-SCANDIC HandelsgmbH

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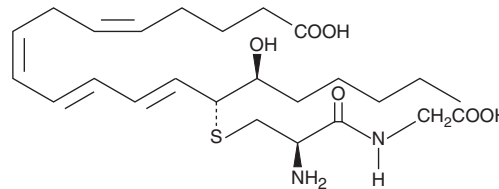
# PRODUCT INFORMATION



## 14,15-Leukotriene D<sub>4</sub>

Item No. 10011361

**CAS Registry No.:** 75290-64-1  
**Formal Name:** S-[(1R,2E,4E,6Z,9Z)-13-carboxy-1-[(1S)-1-hydroxyhexyl]-2,4,6,9-tridecatetraen-1-yl]-L-cysteinyl-glycine  
**Synonyms:** Eoxin D<sub>4</sub>, EXD<sub>4</sub>, 14,15-LTD<sub>4</sub>  
**MF:** C<sub>25</sub>H<sub>40</sub>N<sub>2</sub>O<sub>6</sub>S  
**FW:** 496.7  
**Purity:** ≥97%  
**UV/Vis.:** λ<sub>max</sub>: 280 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -80°C  
**Stability:** ≥1 year



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

### Laboratory Procedures

14,15-Leukotriene D<sub>4</sub> (14,15-LTD<sub>4</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 14,15-LTD<sub>4</sub> in these solvents is approximately 50 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of 14,15-LTD<sub>4</sub> is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 14,15-LTD<sub>4</sub> in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

14,15-LTD<sub>4</sub> is a member of an alternate class of LTs synthesized by a pathway involving the dual actions of 15- and 12-lipoxygenases (15- and 12-LOs) on arachidonic acid via 15-HpETE and 14,15-LTA<sub>4</sub> intermediates.<sup>1-4</sup> 14,15-LTD<sub>4</sub> is classified as an eoxin (EXD<sub>4</sub>), because it is formed mostly by eosinophils.<sup>3</sup> However, mast cells and nasal polyps can synthesize 14,15-LTD<sub>4</sub> as well. Little is known about the physiological actions of 14,15-LTD<sub>4</sub>. It has weak contractile activity on both guinea pig ileum and pulmonary parenchyma in contrast to the effects of 5-LO-derived LTs.<sup>5,6</sup> However, in an *in vitro* permeability assay, 14,15-LTD<sub>4</sub> can increase vascular permeability of human endothelial cell monolayers, with similar potency to that of 5-LO-derived LTs, resulting in plasma leakage, a hallmark of inflammation.<sup>3</sup>

### References

1. Yokoyama, C., Shinjo, F., Yoshimoto, T., *et al. J. Biol. Chem.* **261**, 16714-16721 (1986).
2. Bryant, R.W., Schewe, T., Rapoport, S.M., *et al. J. Biol. Chem.* **260**, 3548-3555 (1985).
3. Feltenmark, S., Gautam, N., Brunnström, Å., *et al. Proc. Natl. Acad. Sci. USA* **105**(2), 680-685 (2008).
4. Sailesh, S., Kumar, Y.V.K., Prasad, M., *et al. Arch. Biochem. Biophys.* **315**(2), 362-368 (1994).
5. Drazen, J.M., Lewis, R.A., Austen, K.F., *et al. Proc. Natl. Acad. Sci. USA* **78**(5), 3195-3198 (1987).
6. Sala, A., Civelli, M., Oliva, D., *et al. Eicosanoids* **3**, 105-110 (1990).

#### 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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