

# PRODUCT INFORMATION



## RCTR1

Item No. 24896

CAS Registry No.: 2095607-49-9

Formal Name: (4Z,7S,8R,9E,11E,13Z,15E,17S,19Z)-8-(((R)-2-((S)-4-amino-4-carboxybutanamido)-3-((carboxymethyl)amino)-3-oxopropyl)thio)-7,17-dihydroxydocosa-4,9,11,13,15,19-hexaenoic acid

Synonyms: Resolvin Glutathione Conjugate in Tissue Regeneration 1, Resolvin Sulfido Conjugate 1

MF:  $C_{32}H_{47}N_3O_{10}S$

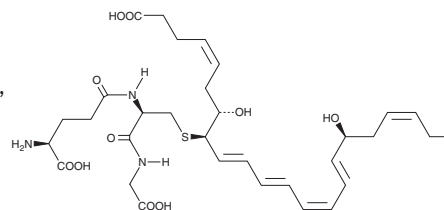
FW: 665.8

Purity:  $\geq 95\%$

Supplied as: A solution in ethanol

Storage:  $-80^{\circ}\text{C}$

Stability:  $\geq 1$  year



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

## Laboratory Procedures

RCTR1 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.

## Description

Resolvin conjugate in tissue regeneration 1 (RCTR1) is a specialized pro-resolving mediator (SPM) biosynthesized from docosahexaenoic acid (DHA; Item No. 90310) by isolated human macrophages and apoptotic polymorphonuclear (PMN) neutrophils.<sup>1</sup> It has been found in human spleen and bone marrow.<sup>2</sup> RCTR1 is produced via lipoxygenase-mediated oxidation of DHA to 7(S)-8-epoxy-17(S)-HDHA, which is conjugated to glutathione.<sup>1-3</sup> RCTR1 (10 nM) increases phagocytosis of *E. coli* or apoptotic neutrophils in isolated human monocyte-derived macrophages.<sup>2</sup> It decreases chemotaxis induced by leukotriene B<sub>4</sub> (LTB<sub>4</sub>; Item No. 20110) in isolated human neutrophils when used at a concentration of 10 nM. RCTR1 (1 and 10 nM) accelerates tissue regeneration in planaria. Intraperitoneal administration of RCTR1 (100 ng/animal) shortens the inflammatory resolution period and decreases inflammatory exudate neutrophil infiltration in a mouse model of *E. coli*-induced peritonitis.

## References

1. Dalli, J., Ramon, S., Norris, P.C., *et al.* Novel proresolving and tissue-regenerative resolvin and protectin sulfido-conjugated pathways. *FASEB J.* **29**(5), 2120-2136 (2015).
2. de la Rosa, X., Norris, P.C., Chiang, N., *et al.* Identification and complete stereochemical assignments of the new resolvin conjugates in tissue regeneration in human tissues that stimulate proresolving phagocyte functions and tissue regeneration. *Am. J. Pathol.* **188**(4), 950-966 (2018).
3. Rodriguez, A.R. and Spur, B.W. First total synthesis of pro-resolving and tissue-regenerative resolvin sulfido-conjugates. *Tetrahedron Lett.* **58**(16), 1662-1668 (2017).

### 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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