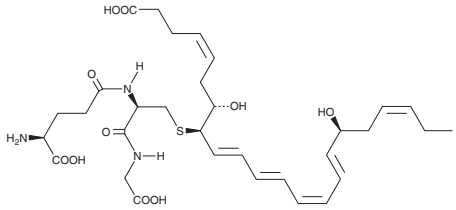
PRODUCT INFORMATION

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:	≥95%
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

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.[1] It has been found in human spleen and bone marrow.[2] RCTR1 is produced via lipoxygenase-mediated oxidation of DHA to 7(S)-8-epoxy-17(S)-HDHA, which is conjugated to glutathione.[1-3] RCTR1 (10 nM) increases phagocytosis of *E. coli* or apoptotic neutrophils in isolated human monocyte-derived macrophages.[2] It decreases chemotaxis induced by leukotriene B_4 (LTB_4; 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).

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