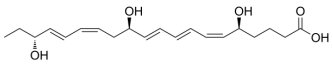
Resolvin E1

Cat. No.:	HY-114041
CAS No.:	552830-51-0
Molecular Formula:	$C_{20}H_{30}O_5$
Molecular Weight:	350.45
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Solution, -20°C, 2 years



BIOLOGICAL ACTIVITY

Description	Resolvin E1 (RvE1), a potent endogenous pro-resolving mediator of inflammation, is derived from omega-3 fatty acid eicosapentaenoic acid (EPA). Resolvin E1 is endogenously biosynthesized from EPA in the presence of Aspirin during the spontaneous resolution phase of acute inflammation, where specific cell-cell interactions occur. Resolvin E1 possesses unique counterregulatory actions that inhibit polymorphonuclear leukocyte (PMN) transendothelial migration. Resolvin E1 also acts as a potent inhibitor of leukocyte infiltration, dendritic cell migration, and IL-12 production[1][2].
IC_{50} & Target	Human Endogenous Metabolite
In Vitro	Resolvin E1 (0.1-100 nM) gives concentration-dependent inhibition of TNF-α–induced NF-κB activation with an EC_{50} of ⊠1.0 nM in ChemR23-transfected cells. Resolvin E1 (100 nM) increases phosphorylation of extracellular signal-regulated kinase (ERK) mitogen-activated protein (MAP) kinase both in peripheral blood monocytes and HEK-ChemR23 cells[2]. Resolvin E1 specifically interacts with the LTB_4 receptor BLT1 on neutrophils and ChemR23 on monocytes to regulate leukocytes during inflammation. Resolvin E1 also stimulates the uptake and clearance of local cytokine[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Resolvin E1 (1.0 μg per mouse; 50 μg/kg; i.p.; on days -8, -1, and 0) protects mice from TNBS (2,4,6-trinitrobenzene sulfonic acid) colitis[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6- to 8-week-old female BALB/c mice (TNBS colitis model)[1]
Dosage:	1.0 μg per mouse; 50 μg/kg
Administration:	i.p.; on days -8, -1, and 0 before the induction of colitis
Result:	Reduced overall mortality, which was 25% and 62.5% at 1.0 μg per mouse and 50 μg/kg, respectively.

REFERENCES

[1]. Arita M, et al. Resolvin E1, an endogenous lipid mediator derived from omega-3 eicosapentaenoic acid, protects against 2,4,6-trinitrobenzene sulfonic acid-induced colitis. Proc Natl Acad Sci U S A. 2005 May 24;102(21):7671-6.

[2]. Schwab JM, et al. Resolvin E1 and protectin D1 activate inflammation-resolution programmes. Nature. 2007 Jun 14;447(7146):869-74.

[3]. Hasturk H, et al. Resolvin E1 regulates inflammation at the cellular and tissue level and restores tissuehomeostasis in vivo. J Immunol. 2007 Nov 15;179(10):7021-9.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA