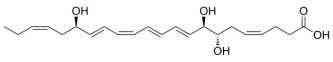
17(R)-Resolvin D1

Cat. No.:	HY-125527A
CAS No.:	528583-91-7
Molecular Formula:	$C_{22}H_{32}O_5$
Molecular Weight:	376.49
Target:	TRP Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

17R-Resolvin D1 (17R-RvD1; AT-RvD1) is an aspirin-triggered epimer of Resolvin D1, which exhibits anti-inflammatory activity in mice and human PMNs cells[1]. 17R-Resolvin D1 specificially inhibits TRPV3 with an IC_{50} of 398 nM and exhibits peripheral anti-nociceptive efficacy[2].

IC_{50} & Target

TRPV3
398 nM (IC_{50})

In Vitro

17R-Resolvin D1 (0-1000 nM) dose-dependently reduces fMLP-induced human polymorphonuclear leukocyte (PMN) transendothelial migration as first event in acute inflammation response[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Migration Assay [1]

Cell Line:	PMNs
Concentration:	0-1000 nM
Incubation Time:	30 min
Result:	Reduced fMLP-induced human PMNs transendothelial migration in a dose-dependent manner, reduced 65% PMNs transmigration at the concentration of 1 μM.

In Vivo

17R-Resolvin D1 (0.05-50 μg/kg, i.v.) reduces PMN infiltration with a maximal inhibition of 35% at a dose of 100 ng/kg in FVB mice[1].

17R-Resolvin D1 (30 μM in 20 μL, i.d.) reduces the TRPV3-specific acute pain in CFA-inflamed ICR mice[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Murine peritonitis bearing FVB mice[1]
Dosage:	0.05-50 μg/kg
Administration:	i.v., single dosage
Result:	Reduced total leukocytic infiltration, the maximal decrease in total leukocytes with a 100

	ng dose.

Animal Model:	CFA-inflamed ICR mice[2]
Dosage:	30 μM in 20 μL
Administration:	i.d.
Result:	Reduced the heat threshold in animals with a CFA-inflamed hind paw.

REFERENCES

[1]. Sun YP, et al., Resolvin D1 and its aspirin-triggered 17R epimer. Stereochemical assignments, anti-inflammatory properties, and enzymatic inactivation. J Biol Chem. 2007 Mar 30;282(13):9323-9334.

[2]. Bang S, et al., 17(R)-resolvin D1 specifically inhibits transient receptor potential ion channel vanilloid 3 leading to peripheral antinociception. Br J Pharmacol. 2012 Feb;165(3):683-92.

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