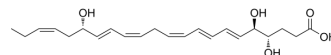


Resolvin D4

Cat. No.:	HY-113533
CAS No.:	1025684-60-9
Molecular Formula:	C ₂₂ H ₃₂ O ₅
Molecular Weight:	376
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Resolvin D4 (RvD4), a specialized proresolving mediator, can be produced in bioactive levels during <i>S. aureus</i> infection ^[1] .	
In Vitro	<p>Resolvin D4 (RvD4) stops neutrophil infiltration in sterile peritonitis and <i>S. aureus</i> skin infection^[1].</p> <p>Resolvin D4 (RvD4, 0-10 nM) enhances human macrophage and dermal fibroblast phagocytosis and efferocytosis^[1].</p> <p>Resolvin D4 (RvD4, 0-10 nM) statistically significantly increases macrophage efferocytosis of apoptotic neutrophils by 40-50%^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
In Vivo	<p>Resolvin D4 (RvD4, 10 ng/mouse) decreases percent of PMN, giving ~31% reduction at 4 hours^[1].</p> <p>Resolvin D4 (RvD4, 10 ng/mouse) modulates the severity of thrombo-inflammatory disease in vivo and improves thrombus resolution^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
	Animal Model:	6-8-week-old male FVB mice (a self-limited bacterial inoculation (105 c.f.u) into the dorsal pouch) ^[1] .
	Dosage:	200 ng/mouse (saline containing 0.01% EtOH).
	Administration:	I.P..
	Result:	<p>Gave lower PMN levels in the cavity in mice treated with RvD4.</p> <p>Significantly lowered bacterial counts when compared to vehicle control.</p> <p>Stopped leukocyte influx to the site of infection in the dorsal pouch cavity as well as the inflammation-initiating eicosanoids by reducing levels of PGD₂ and LTB₄.</p>
	Animal Model:	Thrombus-bearing mice ^[2] .
	Dosage:	3 µg.
	Administration:	IV via tail vein injection on day 1 and day 4 after IVC stenosis.
	Result:	Accelerated venous thrombus resolution in mice.

REFERENCES

- [1]. Jeremy W Winkler, et al. Resolvin D4 stereoassignment and its novel actions in host protection and bacterial clearance. *Sci Rep.* 2016 Jan 8;6:18972.
- [2]. Deya Cherpokova, et al. Resolvin D4 attenuates the severity of pathological thrombosis in mice. *Blood.* 2019 Oct 24;134(17):1458-1468.
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Caution: Product has not been fully validated for medical applications. For research use only.

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