

Product Datasheet

RS504393

Catalog No. **BP-02253** · CAS **300816-15-3** · Form **free base** · Physical state **other** · Color **White to off-white** · Version **1.0** · Revision **2026-09-03**

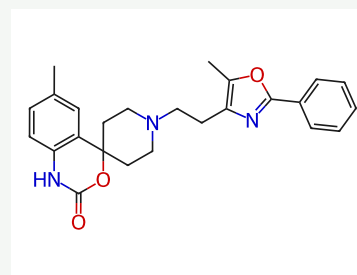
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Target CCR	Research area Inflammation/Immunology; Endocrinology
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Molecular formula **C₂₅H₂₇N₃O₃**

Molecular weight **417.5002**

STRUCTURE



DESCRIPTION

RS 504393 is a selective CCR2 chemokine receptor antagonist (IC₅₀ values are 89 nM and > 100 μM for inhibition of human recombinant CCR2 and CCR1 receptors respectively).

BIOLOGICAL ACTIVITY

In Vitro

RS 504393 inhibits the MCP-1-induced chemotaxis with an IC₅₀ of 330 nM. RS 504393 treatment suppresses allergen induced β-hexosaminidase release significantly. Without allergen priming, MCP-1 induces mast cell degranulation, which is completely suppressed by RS 504393.

In Vivo

RS504393 (0.3-3 μg) with CCL2 progressively blocks thermal hyperalgesia dose-dependently in mice[1]. RS 504393 (5 mg/kg, i.v.) suppresses the elevated numbers of leukocytes and increased total protein content in BALF induced by The LPS. RS504393 significantly down regulates the LPS-induced elevation of IL-1β, PAI-1 mRNA and protein expressions. RS504393 significantly suppresses induced lung edema, protein-rich fluid, polymorphonuclear accumulation and bronchial wall thickening induced by LPS[2]. RS-504393 significantly reduces renal pathology, especially the extensive interstitial fibrosis mediated by decrease in type I collagen synthesis in a UUO model.

SOLUBILITY

Soluble in DMSO

In vitro DMSO : 10 mg/mL

REFERENCES

[1]. Baamonde, Ana., et al. Involvement of glutamate NMDA and AMPA receptors, glial cells and IL-1β in the spinal hyperalgesia evoked by the chemokine CCL2 in mice. Neuroscience Letters (2011), 502(3), 178-181.

- [2]. Yang, Dong., et al. Roles of CC chemokine receptors (CCRs) on lipopolysaccharide-induced acute lung injury. *Respiratory Physiology & Neurobiology* (2010), 170(3), 253-259.
- [3]. Kitagawa, Kiyoki., et al. Blockade of CCR2 ameliorates progressive fibrosis in kidney. *American Journal of Pathology* (2004), 165(1), 237-246.
- [4]. Tominaga T, et al. Blocking mast cell-mediated type I hypersensitivity in experimental allergic conjunctivitis by monocyte chemoattractant protein-1/CCR2. *Invest Ophthalmol Vis Sci*. 2009 Nov;50(11):5181-8.
- [5]. Mirzadegan T, et al. Identification of the binding site for a novel class of CCR2b chemokine receptor antagonists: binding to a common chemokine receptor motif within the helical bundle. *J Biol Chem*. 2000 Aug 18;275(33):25562-71.

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