

Product data sheet



MedKoo Cat#: 563044 Name: R243 CAS: 688352-84-3 Chemical Formula: C ₂₁ H ₂₇ NO ₄ Exact Mass: 357.194 Molecular Weight: 357.45		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

Product description:

R243 is an inhibitor of CCR8 signaling and chemotaxis.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO (ultrasonic)	125	349.71

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.80 mL	13.99 mL	27.97 mL
5 mM	0.56 mL	2.80 mL	5.60 mL
10 mM	0.28 mL	1.40 mL	2.80 mL
50 mM	0.06 mL	0.28 mL	0.56 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Berenguer J, Lagerweij T, Zhao XW, Dusoswa S, van der Stoop P, Westerman B, de Gooijer MC, Zoetemelk M, Zomer A, Crommentuijn MHW, Wedekind LE, López-López À, Giovanazzi A, Bruch-Oms M, van der Meulen-Muileman IH, Reijmers RM, van Kuppevelt TH, García-Vallejo JJ, van Kooyk Y, Tannous BA, Wesseling P, Koppers-Lalic D, Vandertop WP, Noske DP, van Beusechem VW, van Rheeën J, Pegtel DM, van Tellingén O, Wurdinger T. Glycosylated extracellular vesicles released by glioblastoma cells are decorated by CCL18 allowing for cellular uptake via chemokine receptor CCR8. *J Extracell Vesicles*. 2018 Mar 13;7(1):1446660. doi: 10.1080/20013078.2018.1446660. PMID: 29696074; PMCID: PMC5912193.

In vivo study

- García-Domínguez M, Aguirre A, Lastra A, Hidalgo A, Baamonde A, Menéndez L. The Systemic Administration of the Chemokine CCL1 Evokes Thermal Analgesia in Mice Through the Activation of the Endocannabinoid System. *Cell Mol Neurobiol*. 2019 Nov;39(8):1115-1124. doi: 10.1007/s10571-019-00706-3. Epub 2019 Jun 15. PMID: 31203533.
- Oshio T, Kawashima R, Kawamura YI, Hagiwara T, Mizutani N, Okada T, Otsubo T, Inagaki-Ohara K, Matsukawa A, Haga T, Kakuta S, Iwakura Y, Hosokawa S, Dohi T. Chemokine receptor CCR8 is required for lipopolysaccharide-triggered cytokine production in mouse peritoneal macrophages. *PLoS One*. 2014 Apr 8;9(4):e94445. doi: 10.1371/journal.pone.0094445. PMID: 24714157; PMCID: PMC3979852.

7. Bioactivity

Biological target:

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R243 inhibits CCL1/CCR8 interaction and inhibits CCR8 signaling and chemotaxis. R243 has antinociceptive and anti-inflammatory effects.

In vitro activity

Cancer cells release extracellular vesicles (EVs) that contain functional biomolecules such as RNA and proteins. Using in vitro and in vivo stem-like glioblastoma models, this study demonstrated that EV-induced phenotypes are neutralised by R243. Interference with chemokine receptors may offer therapeutic opportunities against EV-mediated cross-talk in glioblastoma.

Reference: Extracell Vesicles. 2018 Mar 13;7(1):1446660. <https://pubmed.ncbi.nlm.nih.gov/29696074/>

In vivo activity

Administration of R243 to mice attenuated peritoneal adhesions. R243 prevented hapten-induced colitis. These results are indicative of cross talk between signaling pathways downstream of CCR8 and TLR-4 that induces cytokine production by PM ϕ . This study identified a novel macrophage innate immune response pathway that involves a chemokine receptor.

Reference: PLoS One. 2014 Apr 8;9(4):e94445. <https://pubmed.ncbi.nlm.nih.gov/24714157/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.