

# Receptor CCR7 binds CCL19 and 21 ligands

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## Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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## Literature references

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)

Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)

Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)

Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

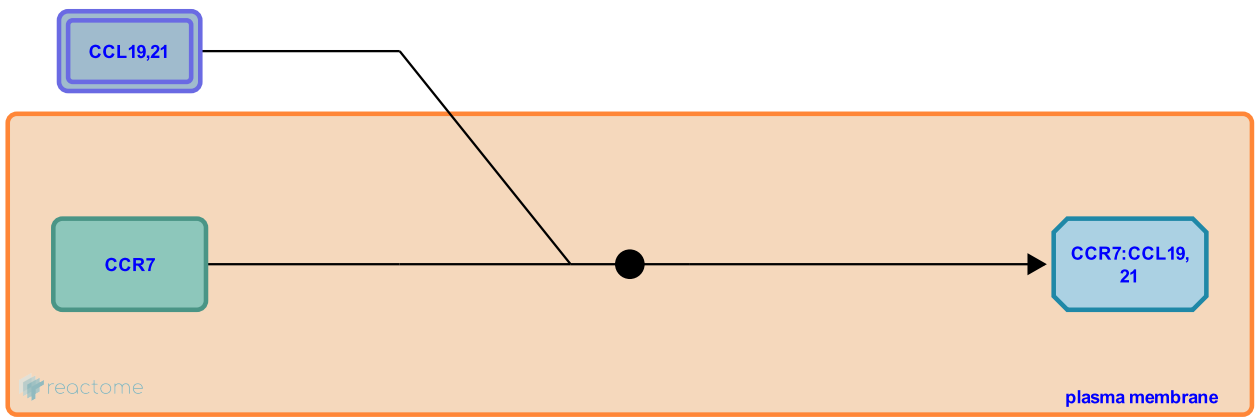
This document contains 1 reaction ([see Table of Contents](#))

Receptor CCR7 binds CCL19 and 21 ligands ↗

Stable identifier: R-HSA-373071

Type: binding

Compartments: extracellular region, plasma membrane



CCR7 (Epstein-Barr virus-induced gene 1, EB11) (Birkenbach M, 1993; Schweickart VL et al, 1994) plays an important role in the trafficking of B and T lymphocytes and dendritic cells across high endothelial venules. Both CCL19 (Macrophage inflammatory protein 3 beta, MIP-3-beta; EB11-ligand chemokine, ELC) (Yoshida R et al, 1997) and CCL21 (Secondary lymphoid-tissue chemokine, SLC; Beta chemokine exodus-2) (Yoshida R et al, 1998) bind specifically to CCR7.

Literature references

Kieff, E., Yalamanchili, R., Josefsen, K., Birkenbach, M., Lenoir, G. (1993). Epstein-Barr virus-induced genes: first lymphocyte-specific G protein-coupled peptide receptors. *J Virol*, 67, 2209-20. ↗

Gray, PW., Byers, MG., Schweickart, VL., Shows, TB., Godiska, R., Raport, CJ. (1994). Cloning of human and mouse EB11, a lymphoid-specific G-protein-coupled receptor encoded on human chromosome 17q12-q21.2. *Genomics*, 23, 643-50. ↗

Editions

2008-08-21	Authored	Jassal, B.
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