IL15 binds IL15RA

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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

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

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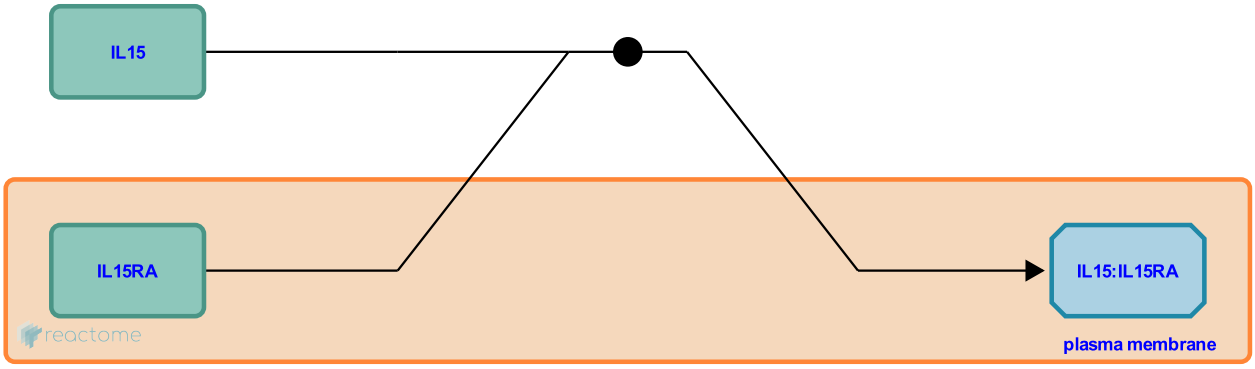
Stable identifier: R-HSA-8983307

Type: binding

Compartments: extracellular region, plasma membrane



Interleukin 15 (IL15) binds Interleukin 15 receptor subunit alpha (IL15RA, IL15Rα). The high affinity Interleukin 15 receptor is a heterotrimer of IL15RA, Interleukin 2 receptor subunit beta (IL2RB, IL2Rβ, IL15RB) and Cytokine receptor common subunit gamma (IL2RG, IL2Rγ). IL15RA is structurally related to the alpha subunit of the Interleukin-2 receptor and determines high affinity binding for Interleukin 15 (IL15) (Giri et al. 1994, 1995, Anderson et al. 1995, Dubois et al. 2002). More in detail, IL15RA binds specifically to IL15 with high affinity (Kd=30-100 pM), whereas IL2RA specifically binds to IL2 with a comparatively lower affinity (Kd=10-30 nM) (Bernard et al. 2004).

Literature references

Giri, JG., Kumaki, S., Ahdieh, M., Friend, DJ., Loomis, A., Shanebeck, K. et al. (1995). Identification and cloning of a novel IL-15 binding protein that is structurally related to the alpha chain of the IL-2 receptor. *EMBO J, 14*, 3654-63 . ↗

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Editions

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