L1 dimer binds Ankyrin

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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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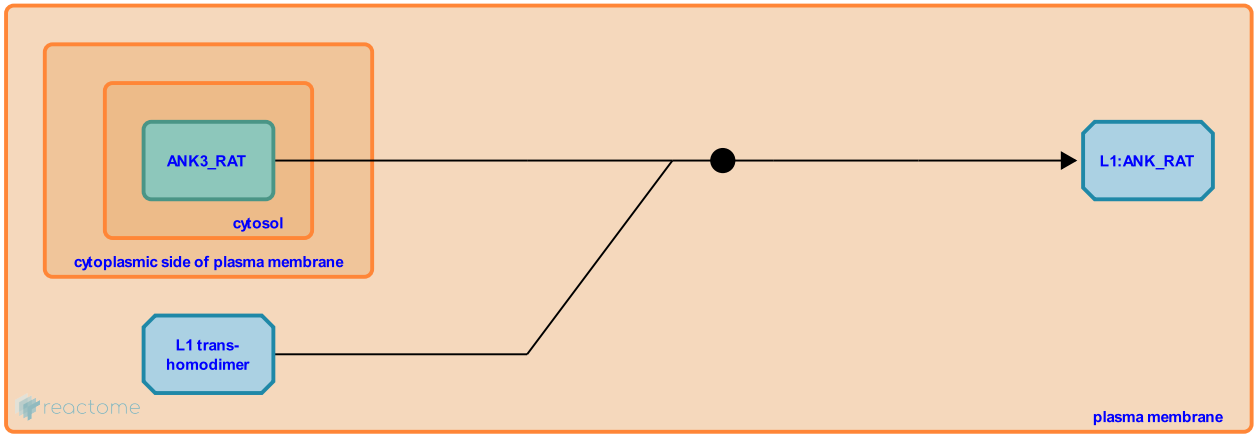
Stable identifier: R-NUL-443049

Type: binding

Compartments: cytosol, plasma membrane



L1 recruits membrane skeletal component ankyrin to cell to cell contact sites in response to cis interaction with homophilic axonin 1/TAG 1 or trans L1 L1 homophilic interaction although in mammalian cells trans binding interactions are not required. L1 interacts with ankyrin proteins through two highly conserved amino acid sequence motifs, LADY and FIGQY.
Ankyrin binding immobilizes L1 molecules in the neuronal plasma membrane. This interaction is required for axon maintenance. L1 also elevates cyclic AMP levels in neurons via ankyrin B and mediates Ca+2 dependent attraction.The L1/ankyrin interaction is a vital determinant of synaptic targeting of retinal axons to the superior colliculus and cooperates with EphrinB/EphB signaling to induce axon branch attraction.

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Editions

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