SALM1 binds NMDA receptor

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03/05/2024

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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

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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. ↗

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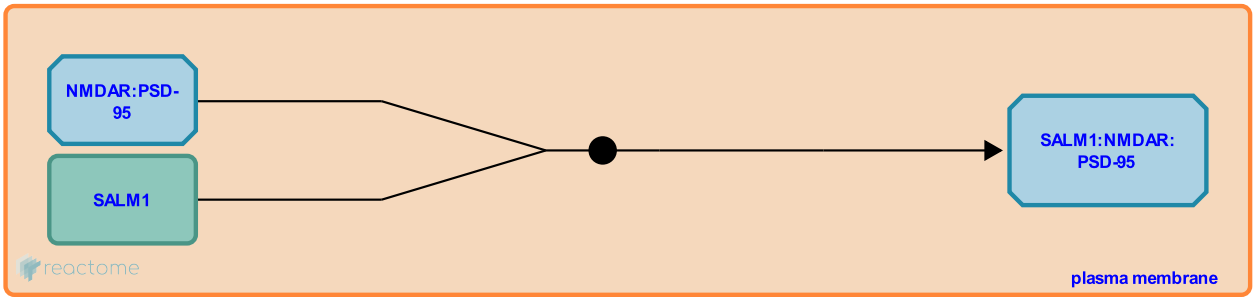
Stable identifier: R-HSA-8849906

Type: binding

Compartments: plasma membrane



SALM1 interacts with and recruits NMDA receptors to early synapses. NMDA receptors are involved in the development of excitatory synapse by interacting with PDZ proteins of the PSD-95 family through its NR2 subunits. SALM1 can directly interact with the extracellular domain of the NR1 subunit of NMDA receptor or indirectly by binding to PSD-95, which may recruit NMDA receptor via the NR2 subunits of NMDA receptors (Wang et al. 2006, Niethammer et al. 1996, Kornau et al. 1995). SALM1 also often localizes with the NR1 subunit of NMDA receptors in hippocampal and cerebellar neurons (Thevenon et al., 2015).

Literature references

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Editions

2015-12-18	Authored, Edited	Garapati, P V.
2016-02-04	Reviewed	Kim, E.
2016-05-17	Reviewed	Petralia, RS., Seabold, GK.