

Trafficking of GluR2-containing AMPA receptors to extrasynaptic sites

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19/05/2024

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

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

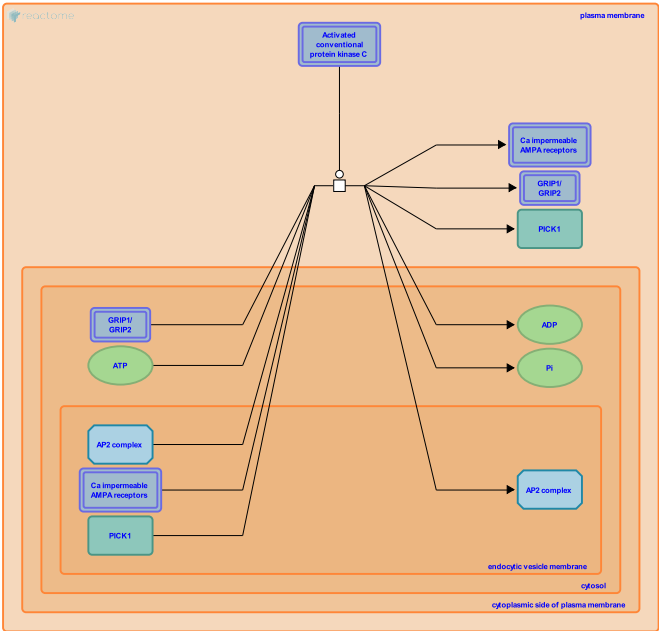
This document contains 1 reaction ([see Table of Contents](#))

Trafficking of GluR2-containing AMPA receptors to extrasynaptic sites ↗

Stable identifier: R-HSA-416639

Type: transition

Compartments: plasma membrane



GluR2 containing AMPA receptors are trafficked to the plasmamembrane by the activation of Ca activated PKC that binds PICK. The PICK interaction delivers GluR2 containing AMPA receptors to the Plasmamembrane. This reaction is a part of constitutive recycling of AMPA receptor that delivers the AMPA receptors from the endosome to the plasmamembrane and back to endosome from the plasmamembrane.

Literature references

Ziff, EB., Lu, W. (2005). PICK1 interacts with ABP/GRIP to regulate AMPA receptor trafficking. *Neuron*, 47, 407-21. ↗

Editions

2008-01-14	Authored	Mahajan, SS.
2009-05-15	Reviewed	Ziff, EB.
2009-05-31	Edited	Mahajan, SS.