ERBB2 Regulates Cell Motility

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08/12/2019


**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**


Reactome database release: 70

This document contains 1 pathway and 2 reactions (see Table of Contents)
ERBB2 Regulates Cell Motility

Stable identifier: R-HSA-6785631

Activated ERBB2 heterodimers regulate cell motility through association with MEMO1. MEMO1 retains activated RHOA GTPase and its associated protein DIAPH1 at the plasma membrane, thus linking ERBB2 activation with the microtubule and actin dynamics downstream of the RHOA:GTP:DIAPH1 complex (Marone et al. 2004, Qiu et al. 2008, Zaoui et al. 2008, Zaoui et al. 2010).

Literature references


Editions

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<td>Orlic-Milacic, M.</td>
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Phosphorylated ERBB2 heterodimers bind MEMO1

Location: ERBB2 Regulates Cell Motility

Stable identifier: R-HSA-6785636

Type: binding

Compartments: cytosol, plasma membrane


Followed by: MEMO1 binds RHOA:GTP:DIAPH1

Literature references


Editions

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MEMO1 binds RHOA:GTP:DIAPH1

Location: ERBB2 Regulates Cell Motility

Stable identifier: R-HSA-6785648

Type: binding

Compartments: cytosol, plasma membrane

MEMO1, in complex with phosphorylated ERBB2 heterodimers, associates with the complex of activated RHOA and formin family member DIAPH1. MEMO1 maintains the plasma membrane association of the RHOA:GTP:DIAPH1 complex (Zaoui et al. 2008) and modulates RHOA:GTP:DIAPH1-regulated actin and microtubule dynamics and the consequent cell motility/migration downstream of ERBB2 (Marone et al. 2004, Zaoui et al. 2010).

Preceded by: Phosphorylated ERBB2 heterodimers bind MEMO1

Literature references


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