Interaction of E3 with substrate and E2-Ub complex

Elliott, T., Garapati, P V.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

05/05/2024

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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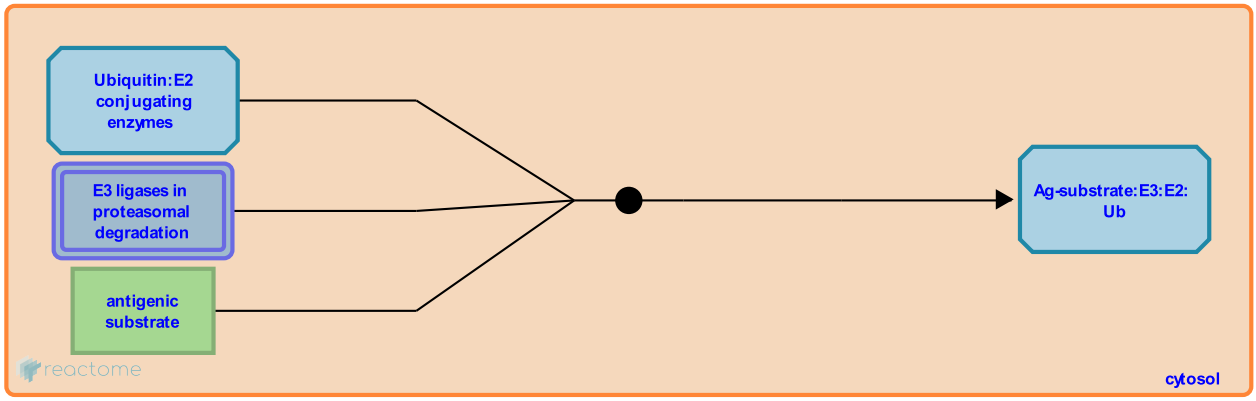
Stable identifier: R-HSA-983157

Type: binding

Compartments: cytosol



Ubiquitin E3 ligases confer specificity to ubiquitination by recognizing target substrates and mediating transfer of ubiquitin from an E2 ubiquitin-conjugating enzyme to substrate (Raymond et al. 2009). E3 ligases includes a large, diverse set of proteins characterized by several defining motifs which include a HECT (homologous to E6-associated C-terminus), RING (Really Interesting New Gene) and U-box domains. The E3 ligases can be multisubunit complexes rather than a single polypeptide. Presently three different kinds of E3 complexes have been described called SCF, APC, and VHL. E3 ligases binds to both substrate and an E2 thioesterified with ubiquitin (E2-Ub).

Literature references

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Editions

2010-10-29	Authored, Edited	Garapati, P V.
2011-02-11	Reviewed	Elliott, T.