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Ubiquitin Conjugating Enzyme E2 D3 Rabbit mAb

Catalog # AP76223

Product Information

Application	WB, IP
Primary Accession	P61077
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	16687

Additional Information

Gene ID	7323
Other Names	UBE2D3
Dilution	WB~~1:1000-1:5000 IP~~1:10-1:100
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	UBE2D3
Synonyms	UBC5C, UBCH5C
Function	Accepts ubiquitin from the E1 complex and catalyzes its covalent attachment to other proteins (PubMed:15247280, PubMed:15496420, PubMed:18284575, PubMed:20061386, PubMed:21532592, PubMed:28322253). In vitro catalyzes 'Lys-11'-, as well as 'Lys-48'- linked polyubiquitination (PubMed:15247280, PubMed:15496420, PubMed:18284575, PubMed:20061386, PubMed:21532592). Cooperates with the E2 CDC34 and the SCF(FBXW11) E3 ligase complex for the polyubiquitination of NFKBIA leading to its subsequent proteasomal degradation (PubMed:20347421). Acts as an initiator E2, priming the phosphorylated NFKBIA target at positions 'Lys-21' and/or 'Lys-22' with a monoubiquitin (PubMed:10329681). Ubiquitin chain elongation is then performed by CDC34, building ubiquitin chains from the UBE2D3-primed NFKBIA-linked ubiquitin (PubMed:10329681). Also acts as an initiator E2, in conjunction with RNF8, for the priming of PCNA (PubMed:18948756).

Monoubiquitination of PCNA, and its subsequent polyubiquitination, are essential events in the operation of the DNA damage tolerance (DDT) pathway that is activated after DNA damage caused by UV or chemical agents during S-phase (PubMed:18948756). Associates with the BRCA1/BARD1 E3 ligase complex to perform ubiquitination at DNA damage sites following ionizing radiation leading to DNA repair (PubMed:16628214). Targets DAPK3 for ubiquitination which influences promyelocytic leukemia protein nuclear body (PML-NB) formation in the nucleus (PubMed:18515077). In conjunction with the MDM2 and TOPORS E3 ligases, functions ubiquitination of p53/TP53 (PubMed:12646252, PubMed:15280377). In conjunction with the CBL E3 ligase, targets EGFR for polyubiquitination at the plasma membrane as well as during its internalization and transport on endosomes (PubMed:18508924). In conjunction with the STUB1 E3 quality control E3 ligase, ubiquitinates unfolded proteins to catalyze their immediate destruction (PubMed:11743028). Together with RNF135, catalyzes the viral RNA-dependent 'Lys-63'-linked polyubiquitination of RIGI to activate the downstream signaling pathway that leads to interferon beta production (PubMed:28469175). Together with ZNF598, catalyzes ubiquitination of 40S ribosomal proteins in response to ribosome collisions (PubMed:28685749). In cooperation with the GATOR2 complex, catalyzes 'Lys-6'-linked ubiquitination of NPRL2 (PubMed:36528027).

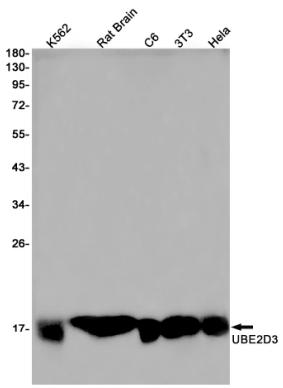
Cellular Location

Cell membrane; Peripheral membrane protein. Endosome membrane; Peripheral membrane protein

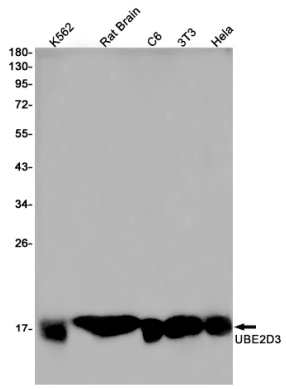
Background

Accepts ubiquitin from the E1 complex and catalyzes its covalent attachment to other proteins. In vitro catalyzes 'Lys-11'-, as well as 'Lys-48'-linked polyubiquitination. Cooperates with the E2 CDC34 and the SCF(FBXW11) E3 ligase complex for the polyubiquitination of NFKBIA leading to its subsequent proteasomal degradation. Acts as an initiator E2, priming the phosphorylated NFKBIA target at positions 'Lys-21' and/or 'Lys-22' with a monoubiquitin. Ubiquitin chain elongation is then performed by CDC34, building ubiquitin chains from the UBE2D3-primed NFKBIA-linked ubiquitin. Acts also as an initiator E2, in conjunction with RNF8, for the priming of PCNA. Monoubiquitination of PCNA, and its subsequent polyubiquitination, are essential events in the operation of the DNA damage tolerance (DDT) pathway that is activated after DNA damage caused by UV or chemical agents during S-phase. Associates with the BRCA1/BARD1 E3 ligase complex to perform ubiquitination at DNA damage sites following ionizing radiation leading to DNA repair. Targets DAPK3 for ubiquitination which influences promyelocytic leukemia protein nuclear body (PML-NB) formation in the nucleus. In conjunction with the MDM2 and TOPORS E3 ligases, functions ubiquitination of p53/TP53. Supports NRDP1-mediated ubiquitination and degradation of ERBB3 and of BRUCE which triggers apoptosis. In conjunction with the CBL E3 ligase, targets EGFR for polyubiquitination at the plasma membrane as well as during its internalization and transport on endosomes. In conjunction with the STUB1 E3 quality control E3 ligase, ubiquitinates unfolded proteins to catalyze their immediate destruction.

Images



Western blot analysis of UBE2D3 in K562, rat Brain, C6, 3T3, Hela lysates using Ubiquitin Conjugating Enzyme E2 D3 antibody.



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