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UBC9 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1261a

Product Information

Application	WB, E
Primary Accession	P63279
Reactivity	Human, Rat, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	67AT1273.95.90
Calculated MW	18007

Additional Information

Gene ID	7329
Other Names	SUMO-conjugating enzyme UBC9, 632-, SUMO-protein ligase, Ubiquitin carrier protein 9, Ubiquitin carrier protein I, Ubiquitin-conjugating enzyme E2 I, Ubiquitin-protein ligase I, p18, UBE2I, UBC9, UBCE9
Target/Specificity	This UBC9 antibody was raised using purified GST-UBC9 fusion protein.
Dilution	WB~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	UBC9 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	UBE2I
Synonyms	UBC9, UBCE9
Function	Accepts the ubiquitin-like proteins SUMO1, SUMO2, SUMO3, SUMO4 and SUMO1P1/SUMO5 from the UBLE1A-UBLE1B E1 complex and catalyzes their covalent attachment to other proteins with the help of an E3 ligase such as RANBP2, CBX4 and ZNF451. Can catalyze the formation of poly-SUMO chains.

	Necessary for sumoylation of FOXL2 and KAT5. Essential for nuclear architecture and chromosome segregation. Sumoylates p53/TP53 at 'Lys-386'. Mediates sumoylation of ERCC6 which is essential for its transcription-coupled nucleotide excision repair activity (PubMed:26620705).
Cellular Location	Nucleus. Cytoplasm Cytoplasm, perinuclear region Note=Mainly nuclear (By similarity). In spermatocytes, localizes in synaptonemal complexes (PubMed:8610150). Recruited by BCL11A into the nuclear body (By similarity). {ECO:0000250|UniProtKB:P63280, ECO:0000269|PubMed:8610150}
Tissue Location	Expressed in heart, skeletal muscle, pancreas, kidney, liver, lung, placenta and brain. Also expressed in testis and thymus.

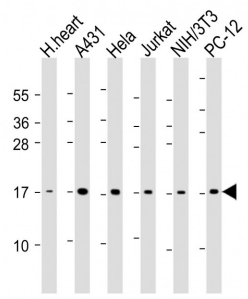
Background

The modification of proteins with ubiquitin is an important cellular mechanism for targeting abnormal or short-lived proteins for degradation. Ubiquitination involves at least three classes of enzymes: ubiquitin-activating enzymes, or E1s, ubiquitin-conjugating enzymes, or E2s, and ubiquitin-protein ligases, or E3s. This gene encodes a member of the E2 ubiquitin-conjugating enzyme family. Four alternatively spliced transcript variants encoding the same protein have been found for this gene.

References

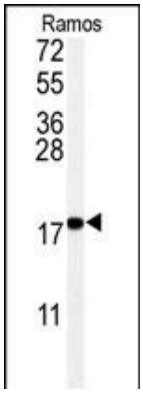
Expression analysis of Ubc9, the single small ubiquitin-like modifier (SUMO) E2 conjugating enzyme, in normal and malignant tissues. Moschos SJ, et al. Hum Pathol, 2010 Sep. PMID 20561671. Ubc9 promotes breast cell invasion and metastasis in a sumoylation-independent manner. Zhu S, et al. Oncogene, 2010 Mar 25. PMID 20023705. Association of SUMO1 and UBC9 genotypes with tumor response in non-small-cell lung cancer treated with irinotecan-based chemotherapy. Han JY, et al. Pharmacogenomics J, 2010 Apr. PMID 19859084. Characterization of papillomavirus E1 helicase mutants defective for interaction with the SUMO-conjugating enzyme Ubc9. Fradet-Turcotte A, et al. Virology, 2009 Dec 20. PMID 19836047. Ubc9 gene polymorphisms and late-onset Alzheimer's disease in the Korean population: a genetic association study. Ahn K, et al. Neurosci Lett, 2009 Nov 20. PMID 19765634.

Images



All lanes : Anti-UBC9 Antibody at 1:1000-1:2000 dilution Lane 1: human heart lysate Lane 2: A431 whole cell lysate Lane 3: Hela whole cell lysate Lane 4: Jurkat whole cell lysate Lane 5: NIH/3T3 whole cell lysate Lane 6: PC-12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 18 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Western blot analysis of anti-UBC9 Antibody (Cat. #AM1261a) in Ramos cell line lysates (35µg/lane). UBC9(arrow) was detected using the purified Mab.



Citations

- Inhibiting ubiquitination causes an accumulation of SUMOylated newly synthesized nuclear proteins at PML bodies
- RanBP2 regulates the anti-retroviral activity of TRIM5α by SUMOylation at a predicted phosphorylated SUMOylation motif.
- Differential effects of SUMO1 and SUMO3 on PKR activation and stability.
- MxA Mediates SUMO-Induced Resistance to Vesicular Stomatitis Virus.
- TRIM5α is a SUMO substrate.
- The SUMOylation of matrix protein M1 modulates the assembly and morphogenesis of influenza A virus.