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# SUMO Conjugating Enzyme UBC9 Rabbit mAb

Catalog # AP76755

## Product Information

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|---|---|
| **Application** | WB, IHC-P, IHC-F, FC, IP |
| **Primary Accession** | P63279 |
| **Reactivity** | Rat, Human, Mouse |
| **Host** | Rabbit |
| **Clonality** | Monoclonal Antibody |
| **Isotype** | IgG |
| **Conjugate** | Unconjugated |
| **Purification** | Affinity Purified |
| **Calculated MW** | 18007 |

## Additional Information

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| **Gene ID** | 7329 |
| **Other Names** | UBE2I |
| **Dilution** | WB~~1:1000 IHC-P~~N/A IHC-F~~N/A FC~~1:10~50 IP~~N/A |
| **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

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| **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). Sumoylates SHMT1 at 'Lys-38' or 'Lys-39' leading to RAN-dependent nuclear import of SHMT1 (PubMed:17446168). Also sumoylates TYMS and DHFR (PubMed:18067453). |
| **Cellular Location** | Nucleus. Cytoplasm Cytoplasm, perinuclear region Note=Mainly nuclear (By |

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|---|---|
| | 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 process of SUMO-1 conjugation is similar to that seen with ubiquitin and other forms of post-translational protein modification. Like ubiquitin, SUMO-1 is conjugated to its target protein by the coordinated action of ubiquitin conjugation enzymes E1, E2 and E3. Ubc9 (or ube2M) is a highly conserved, 158 amino acid protein that acts as a SUMO-1 conjugating enzyme. Ubc9 binds to target proteins through their SUMO-1-CS (consensus sequence) domains and interacts with SUMO via the structurally conserved amino-terminal domain.

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