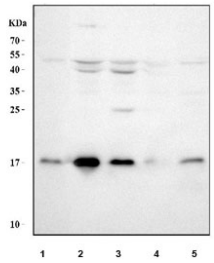
UBC9 Antibody / UBE2I (R31382)

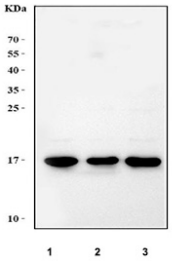
Catalog No.	Formulation	Size
R31382	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

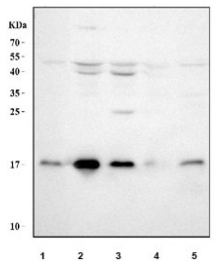
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P63279
Applications	Western Blot : 0.5-1ug/ml Immunoprecipitation : 2ug per 500ug of lysate
Limitations	This UBC9 antibody is available for research use only.



Western blot testing of 1) human placenta, 2) human K562, 3) human HepG2, 4) rat brain and 5) rat kidney tissue lysate with UBC9 antibody. Predicted molecular weight ~18 kDa.



Western blot testing of 1) human K562, 2) human HepG2 and 3) human MCF7 cell lysate with UBC9 antibody. Predicted molecular weight ~18 kDa.



Immunoprecipitation of UBC9 protein from 500ug of human HepG2 whole cell lysate with 2ug of UBC9 antibody.

Description

UBC9 antibody targets Ubiquitin conjugating enzyme E2 I (UBE2I), also known as UBC9, the sole E2-conjugating enzyme responsible for SUMOylation in eukaryotic cells. UBC9 catalyzes the transfer of SUMO proteins to lysine residues on target substrates, a post-translational modification that regulates protein stability, localization, and activity. UBC9 localizes predominantly to the nucleus, with additional cytoplasmic distribution, reflecting its involvement in modifying a wide range of nuclear and cytosolic proteins. As the central E2 enzyme in the SUMO pathway, UBC9 is essential for maintaining normal cellular regulation and stress responses.

Functionally, UBC9 interacts with E1 activating enzymes and SUMO E3 ligases to facilitate site-specific SUMO conjugation of target proteins. SUMOylation influences diverse cellular processes including transcriptional regulation, DNA repair, chromatin organization, nuclear transport, and cell cycle progression. UBC9 expression is broadly detected across tissues, consistent with the fundamental role of SUMO modification in cell physiology. A UBC9 antibody supports studies examining SUMO pathway activity and post-translational protein regulation.

UBC9 plays a critical role in coordinating cellular responses to stress, particularly genotoxic and proteotoxic stress. By modifying transcription factors, DNA repair proteins, and signaling intermediates, UBC9-mediated SUMOylation enables cells to adapt gene expression programs and maintain genome stability. Alterations in UBC9 expression or activity can disrupt SUMOylation balance and lead to widespread changes in protein function and cellular homeostasis. A UBC9 antibody enables investigation of SUMO-dependent regulatory mechanisms under physiological and experimental conditions.

From a biological and disease-relevance perspective, UBC9 has been extensively studied in cancer biology, neurodegeneration, and immune regulation. Dysregulated SUMOylation has been linked to aberrant cell proliferation, impaired stress tolerance, and altered transcriptional control. Because UBC9 is the only E2 enzyme in the SUMO pathway, changes in its activity have broad and system-wide effects on cellular regulation, making it a critical node in post-translational control networks.

At the molecular level, UBC9 is encoded by the UBE2I gene and produces a protein of approximately 158 amino acids. The protein contains a conserved active site cysteine required for SUMO thioester formation and substrate transfer. UBC9 activity is regulated through protein interactions, post-translational modifications, and cellular context. A UBC9 antibody supports research applications focused on SUMOylation, protein modification, and regulatory signaling pathways, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the UBC9 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human UBC9/UBE2I (IKQILLGIQELLNE) was used as the immunogen for this UBC9 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the UBC9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.