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UBB Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1667a

Product Information

Application	WB, FC, E
Primary Accession	P0CG47
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3C12
Isotype	IgG1
Calculated MW	25762
Description	This gene encodes ubiquitin, one of the most conserved proteins known. Ubiquitin is required for ATP-dependent, nonlysosomal intracellular protein degradation of abnormal proteins and normal proteins with a rapid turnover. Ubiquitin is covalently bound to proteins to be degraded, and presumably labels these proteins for degradation. Ubiquitin also binds to histone H2A in actively transcribed regions but does not cause histone H2A degradation, suggesting that ubiquitin is also involved in regulation of gene expression. This gene consists of three direct repeats of the ubiquitin coding sequence with no spacer sequence. Consequently, the protein is expressed as a polyubiquitin precursor with a final amino acid after the last repeat. Aberrant form of this protein has been noticed in patients with Alzheimer's and Down syndrome.
Immunogen	Purified recombinant fragment of human UBB expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	7314
Other Names	Polyubiquitin-B, Ubiquitin, UBB
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	UBB Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name UBB

Function [Ubiquitin]: Exists either covalently attached to another protein, or free (unanchored). When covalently bound, it is conjugated to target proteins via an isopeptide bond either as a monomer (monoubiquitin), a polymer linked via different Lys residues of the ubiquitin (polyubiquitin chains) or a linear polymer linked via the initiator Met of the ubiquitin (linear polyubiquitin chains). Polyubiquitin chains, when attached to a target protein, have different functions depending on the Lys residue of the ubiquitin that is linked: Lys-6-linked may be involved in DNA repair; Lys-11-linked is involved in ERAD (endoplasmic reticulum-associated degradation) and in cell- cycle regulation; Lys-29-linked is involved in proteotoxic stress response and cell cycle; Lys-33-linked is involved in kinase modification; Lys-48-linked is involved in protein degradation via the proteasome; Lys-63-linked is involved in endocytosis, DNA-damage responses as well as in signaling processes leading to activation of the transcription factor NF-kappa-B. Linear polymer chains formed via attachment by the initiator Met lead to cell signaling. Ubiquitin is usually conjugated to Lys residues of target proteins, however, in rare cases, conjugation to Cys or Ser residues has been observed. When polyubiquitin is free (unanchored-polyubiquitin), it also has distinct roles, such as in activation of protein kinases, and in signaling.

Cellular Location [Ubiquitin]: Cytoplasm. Nucleus. Mitochondrion outer membrane; Peripheral membrane protein

References

1. Science. 2009 Aug 14;325(5942):834-40. 2. Biochem Soc Trans. 2009 Oct;37(Pt 5):937-53.

Images

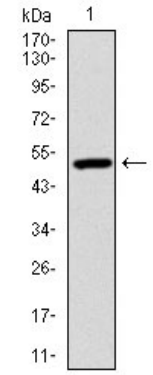


Figure 1: Western blot analysis using UBB mAb against human UBB (AA: 1-299) recombinant protein. (Expected MW is 26 kDa)

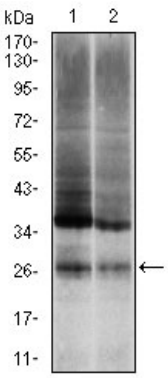


Figure 2: Western blot analysis using UBB mouse mAb against NIH/3T3 (1) and Hela (2) cell lysate.

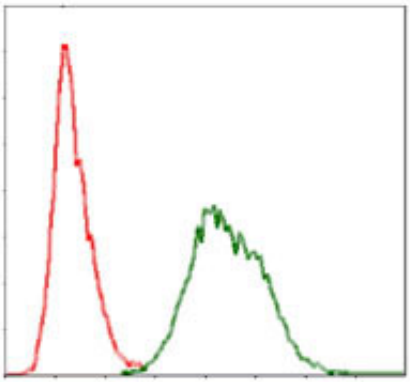


Figure 3: Flow cytometric analysis of Hela cells using UBB mouse mAb (green) and negative control (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.