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E1 Ubiquitin (UBE1) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2113b

Product Information

Application	WB, IHC-P, E
Primary Accession	P22314
Other Accession	Q5U300, Q29504, Q02053, A3KMV5
Reactivity	Human, Mouse
Predicted	Rat, Rabbit, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB04330
Calculated MW	117849
Antigen Region	1026-1058

Additional Information

Gene ID	7317
Other Names	Ubiquitin-like modifier-activating enzyme 1, Protein A1S9, Ubiquitin-activating enzyme E1, UBA1, A1S9T, UBE1
Target/Specificity	This E1 Ubiquitin (UBE1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1026-1058 amino acids from the C-terminal region of human E1 Ubiquitin (UBE1).
Dilution	WB~~1:1000 IHC-P~~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 prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	E1 Ubiquitin (UBE1) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	UBA1
Synonyms	A1S9T, UBE1

Function	Catalyzes the first step in ubiquitin conjugation to mark cellular proteins for degradation through the ubiquitin-proteasome system (PubMed:1447181, PubMed:1606621, PubMed:33108101). Activates ubiquitin by first adenylating its C-terminal glycine residue with ATP, and thereafter linking this residue to the side chain of a cysteine residue in E1, yielding a ubiquitin-E1 thioester and free AMP (PubMed:1447181). Essential for the formation of radiation-induced foci, timely DNA repair and for response to replication stress. Promotes the recruitment of TP53BP1 and BRCA1 at DNA damage sites (PubMed:22456334).
Cellular Location	Cytoplasm. Mitochondrion. Nucleus [Isoform 2]: Cytoplasm
Tissue Location	Detected in erythrocytes (at protein level). Ubiquitous.

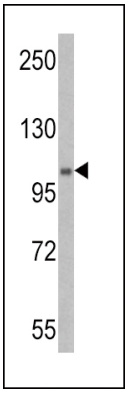
Background

UBE1 catalyzes the first step in ubiquitin conjugation to mark cellular proteins for degradation. This gene complements an X-linked mouse temperature-sensitive defect in DNA synthesis, and thus may function in DNA repair. It is part of a gene cluster on chromosome Xp11.23. Alternative splicing results in 2 transcript variants encoding the same protein, but with different 5' UTR.

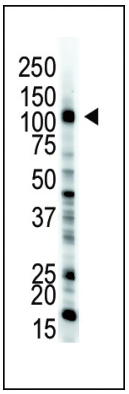
References

Ayusawa, D., et al., Cell Struct. Funct. 17(2):113-122 (1992). Handley, P.M., et al., Proc. Natl. Acad. Sci. U.S.A. 88(1):258-262 (1991). Kudo, M., et al., Exp. Cell Res. 192(1):110-117 (1991). Zacksenhaus, E., et al., Cytogenet. Cell Genet. 53(1):20-22 (1990). Zacksenhaus, E., et al., EMBO J. 9(9):2923-2929 (1990).

Images

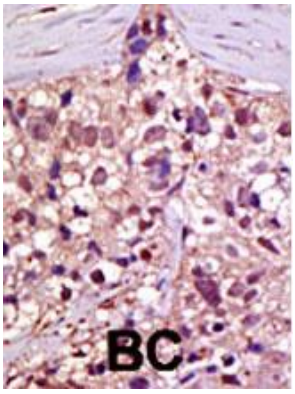


Western blot analysis of E1 Ubiquitin (UBE1) Antibody (C-term) (Cat. #AP2113b) in mouse stomach tissue lysates (35ug/lane). UBE1 (arrow) was detected using the purified Pab.

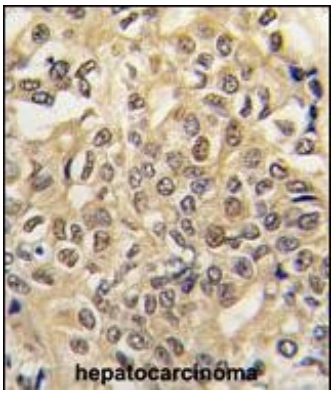


The anti-UBE1 Pab (Cat. #AP2113b) is used in Western blot to detect UBE1 in HL-60 cell lysate.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody,



followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with UBE1 antibody (C-term) (Cat.#AP2113b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.