10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

UBA1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14555a

Product Information

Application	WB, IHC-P, E
Primary Accession	P22314
Other Accession	Q5U300, Q29504, Q02053, A3KMV5, NP_695012.1, NP_003325.2
Reactivity	Human
Predicted	Bovine, Mouse, Rabbit, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34509
Calculated MW	117849
Antigen Region	1-30

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 UBA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human UBA1.
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 purified through a protein A column, followed by peptide affinity purification.
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	UBA1 Antibody (N-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.

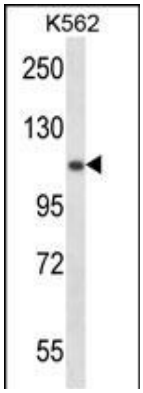
Background

The protein encoded by this gene 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. Alternatively spliced transcript variants that encode the same protein have been described.

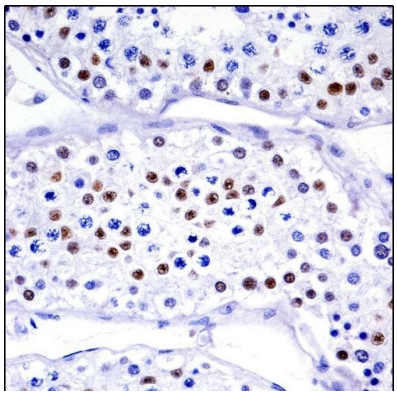
References

Burkhardt, J., et al. J. Rheumatol. 36(10):2149-2157(2009)
Su, Z.L., et al. Leuk. Lymphoma 49(9):1821-1822(2008)
Ramser, J., et al. Am. J. Hum. Genet. 82(1):188-193(2008)
Carbia-Nagashima, A., et al. Cell 131(2):309-323(2007)
Jin, J., et al. Nature 447(7148):1135-1138(2007)

Images



UBA1 Antibody (N-term) (Cat. #AP14555a) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the UBA1 antibody detected the UBA1 protein (arrow).



UBA1 Antibody (N-term) (AP14555a)immunohistochemistry analysis in formalin fixed and paraffin embedded human testis tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of UBA1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Orthogonal ubiquitin transfer identifies ubiquitination substrates under differential control by the two ubiquitin activating enzymes.