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TLK2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8102c

Product Information

Application	WB, E
Primary Accession	Q86UE8
Other Accession	Q9UKI7
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3046
Calculated MW	87661
Antigen Region	141-171

Additional Information

Gene ID	11011
Other Names	Serine/threonine-protein kinase tousled-like 2, HsHPK, PKU-alpha, Tousled-like kinase 2, TLK2
Target/Specificity	This TLK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 141-171 amino acids from the Central region of human TLK2.
Dilution	WB~~1:1000 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	TLK2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TLK2 (HGNC:11842)
Function	Serine/threonine-protein kinase involved in the process of chromatin assembly and probably also DNA replication, transcription, repair, and

chromosome segregation (PubMed:10523312, PubMed:11470414, PubMed:12660173, PubMed:12955071, PubMed:29955062, PubMed:33323470, PubMed:9427565). Phosphorylates the chromatin assembly factors ASF1A and ASF1B (PubMed:11470414, PubMed:20016786, PubMed:29955062, PubMed:35136069). Phosphorylation of ASF1A prevents its proteasome- mediated degradation, thereby enhancing chromatin assembly (PubMed:20016786). Negative regulator of amino acid starvation-induced autophagy (PubMed:22354037).

Cellular Location

Nucleus. Nucleus, nucleoplasm. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton. Note=Colocalizes with the cytoplasmic intermediate filament system during the G1 phase of the cell cycle (PubMed:10455159). Present in the perinuclear region at S phase and in the nucleus at late G2 (PubMed:10455159)

Tissue Location

Detected in placenta, fetal liver, kidney, pancreas, heart and skeletal muscle (PubMed:9427565). Highly expressed in testis (PubMed:9427565, PubMed:9662073). Detected in spleen, thymus, colon, ovary, small intestine, prostate and peripheral blood leukocytes (PubMed:9662073). Almost undetectable in liver and lung (PubMed:9662073).

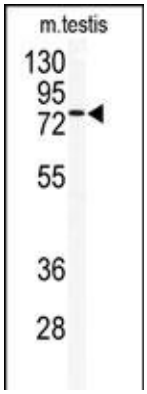
Background

TLK2, a member of the Ser/Thr protein kinase family, is rapidly and transiently inhibited by phosphorylation following the generation of DNA double-stranded breaks during S-phase. This is cell cycle checkpoint and ATM-pathway dependent and appears to regulate processes involved in chromatin assembly. The TLK2 enzyme is cell-cycle regulated, with maximal activity in S-phase. It is inactivated by phosphorylation at Ser-750, potentially by CHK1. TLK2 heterodimerizes with TLK1. This nuclear protein is widely expressed, with presence in fetal placenta, liver, kidney, pancreas, heart and skeletal muscle tissues, and in several adult cell lines.

References

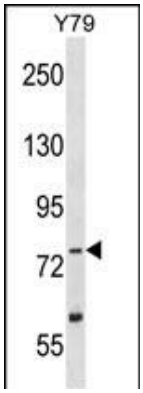
Groth, A., et al., EMBO J. 22(7):1676-1687 (2003). Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002). Sillje, H.H., et al., EMBO J. 18(20):5691-5702 (1999). Yamakawa, A., et al., Gene 202 (1-2), 193-201 (1997).

Images



Western blot analysis of anti-TLK2 Antibody (Center) (Cat.#AP8102c) in mouse testis tissue lysates (35ug/lane).TLK2(arrow) was detected using the purified Pab.

TLK2 Antibody (K155) (Cat. #AP8102c) western blot analysis in Y79 cell line lysates (35ug/lane).This demonstrates the TLK2 antibody detected the TLK2 protein (arrow).



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