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TTBK2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12162a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q6IQ55
Other Accession	Q3UVR3, NP_775771.3
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31984
Calculated MW	137412
Antigen Region	217-245

Additional Information

Gene ID	146057
Other Names	Tau-tubulin kinase 2, TTBK2, KIAA0847
Target/Specificity	This TTBK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 217-245 amino acids from the N-terminal region of human TTBK2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	TTBK2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TTBK2
Synonyms	KIAA0847

Function	Serine/threonine kinase that acts as a key regulator of ciliogenesis: controls the initiation of ciliogenesis by binding to the distal end of the basal body and promoting the removal of CCP110, which caps the mother centriole, leading to the recruitment of IFT proteins, which build the ciliary axoneme. Has some substrate preference for proteins that are already phosphorylated on a Tyr residue at the +2 position relative to the phosphorylation site. Able to phosphorylate tau on serines in vitro (PubMed:23141541). Phosphorylates MPHOSPH9 which promotes its ubiquitination and proteasomal degradation, loss of MPHOSPH9 facilitates the removal of the CP110-CEP97 complex (a negative regulator of ciliogenesis) from the mother centrioles, promoting the initiation of ciliogenesis (PubMed:30375385). Required for recruitment of CPLANE2 and INTU to the mother centriole (By similarity).
Cellular Location	Cell projection, cilium. Cytoplasm, cytoskeleton, cilium basal body. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Cytoplasm, cytosol. Nucleus Note=Localizes at the transition zone, a region between the basal body and the ciliary axoneme (PubMed:23141541). May also be present in cytosol and, at lower level in the nucleus (PubMed:21548880)

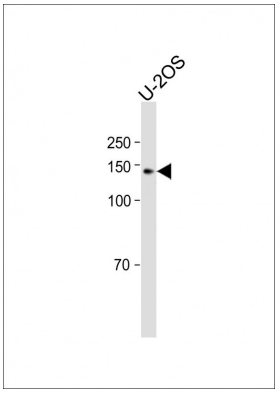
Background

This gene encodes a serine-threonine kinase that putatively phosphorylates tau and tubulin proteins. Mutations in this gene cause spinocerebellar ataxia type 11 (SCA11); a neurodegenerative disease characterized by progressive ataxia and atrophy of the cerebellum and brainstem.

References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Xu, Q., et al. Neurol. Sci. 31(1):107-109(2010)
Edener, U., et al. J. Neurol. 256(11):1856-1859(2009)
Houlden, H., et al. Nat. Genet. 39(12):1434-1436(2007)
Kitano-Takahashi, M., et al. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 63 (PT 7), 602-604 (2007) :

Images



All lanes: Anti-TTBK2 Antibody (N-term) at 1:500 dilution + U-2OS whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 137 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

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