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ULK2 Antibody (Center S323)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19251C

Product Information

Application	IF, WB, E
Primary Accession	Q8IYT8
Other Accession	Q9QY01, NP_001136082.1
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40764
Calculated MW	112694
Antigen Region	300-327

Additional Information

Gene ID	9706
Other Names	Serine/threonine-protein kinase ULK2, Unc-51-like kinase 2, ULK2, KIAA0623
Target/Specificity	This ULK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 300-327 amino acids from the Central region of human ULK2.
Dilution	IF~~1:10~50 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 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	ULK2 Antibody (Center S323) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ULK2
Synonyms	KIAA0623
Function	Serine/threonine-protein kinase involved in autophagy in response to

starvation. Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes. Part of regulatory feedback loops in autophagy: acts both as a downstream effector and a negative regulator of mammalian target of rapamycin complex 1 (mTORC1) via interaction with RPTOR. Activated via phosphorylation by AMPK, also acts as a negative regulator of AMPK through phosphorylation of the AMPK subunits PRKAA1, PRKAB2 and PRKAG1. May phosphorylate ATG13/KIAA0652, FRS2, FRS3 and RPTOR; however such data need additional evidence. Not involved in ammonia-induced autophagy or in autophagic response of cerebellar granule neurons (CGN) to low potassium concentration. Plays a role early in neuronal differentiation and is required for granule cell axon formation: may govern axon formation via Ras-like GTPase signaling and through regulation of the Rab5-mediated endocytic pathways within developing axons.

Cellular Location

Cytoplasmic vesicle membrane; Peripheral membrane protein. Note=Localizes to pre-autophagosomal membrane

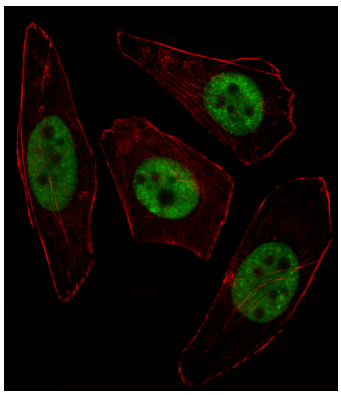
Background

This gene encodes a protein that is similar to a serine/threonine kinase in C. elegans which is involved in axonal elongation. The structure of this protein is similar to the C. elegans protein in that both proteins have an N-terminal kinase domain, a central proline/serine rich (PS) domain, and a C-terminal (C) domain. The gene is located within the Smith-Magenis syndrome region on chromosome 17. Alternatively spliced transcript variants encoding the same protein have been identified. [provided by RefSeq].

References

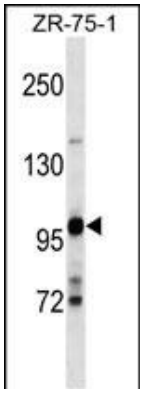
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Stelzl, U., et al. Cell 122(6):957-968(2005)
Tomoda, T., et al. Genes Dev. 18(5):541-558(2004)
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Images



Fluorescent image of U251 cell stained with ULK2 Antibody (Center S323)(Cat#AP19251c).U251 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with ULK2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C).ULK2 immunoreactivity is localized to Nucleus significantly.

ULK2 Antibody (S323) (Cat. #AP19251c) western blot analysis in ZR-75-1 cell line lysates (35ug/lane).This demonstrates the ULK2 antibody detected the ULK2 protein (arrow).



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