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ULK3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13473b

Product Information

Application	WB, E
Primary Accession	Q6PHR2
Other Accession	NP_001092906.1
Reactivity	Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33310
Calculated MW	53444
Antigen Region	347-375

Additional Information

Gene ID	25989
Other Names	Serine/threonine-protein kinase ULK3, Unc-51-like kinase 3, ULK3
Target/Specificity	This ULK3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 347-375 amino acids from the C-terminal region of human ULK3.
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 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	ULK3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ULK3 {ECO:0000303|PubMed:19878745, ECO:0000312|HGNC:HGNC:19703}
Function	Serine/threonine protein kinase that acts as a regulator of smoothened signaling and autophagy (PubMed:19279323, PubMed:19878745, PubMed:20643644, PubMed:31279575). Acts as a positive regulator of

	smoothened signaling in the presence of hedgehog (DHH, IHH or SHH) ligand: autophosphorylates and mediates phosphorylation of full-length GLI2, promoting subsequent phosphorylation by CDK1 and GLI2 dissociation from SUFU and translocation to the nucleus (PubMed:19878745, PubMed:20643644, PubMed:31279575). Also phosphorylates as GLI1 and GLI3, although less efficiently (PubMed:19878745, PubMed:20643644). In the absence of hedgehog ligand, interacts with SUFU, thereby inactivating the protein kinase activity and preventing phosphorylation of GLI proteins (GLI1, GLI2 and/or GLI3) (PubMed:20643644). Also acts as a regulator of autophagy: following cellular senescence, able to induce autophagy (PubMed:19279323).
Cellular Location	Cytoplasm. Note=Localizes to pre-autophagosomal structure during cellular senescence.
Tissue Location	Widely expressed. Highest levels observed in fetal brain. In adult tissues, high levels in brain, liver and kidney, moderate levels in testis and adrenal gland and low levels in heart, lung, stomach, thymus, prostate and placenta. In the brain, highest expression in the hippocampus, high levels also detected in the cerebellum, olfactory bulb and optic nerve. In the central nervous system, lowest levels in the spinal cord

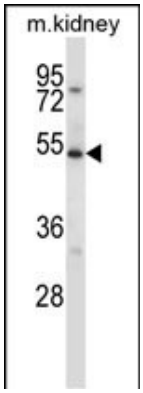
Background

Serine/threonine protein kinase which enhances GLI1 and GLI2 transcriptional activity and consequently positively regulates GLI-dependent SHH signaling. May exert this function by promoting GLI1 nuclear localization. Phosphorylates in vitro GLI2, as well as GLI1 and GLI3, although less efficiently.

References

Maloverjan, A., et al. J. Biol. Chem. 285(39):30079-30090(2010)
Takeuchi, F., et al. Circulation 121(21):2302-2309(2010)
Maloverjan, A., et al. Exp. Cell Res. 316(4):627-637(2010)
Levy, D., et al. Nat. Genet. 41(6):677-687(2009)
Kim, D.H., et al. Blood 113(11):2517-2525(2009)

Images



ULK3 Antibody (C-term) (Cat. #AP13473b) western blot analysis in mouse kidney tissue lysates (35ug/lane).This demonstrates the ULK3 antibody detected the ULK3 protein (arrow).

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