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ULK3 Antibody (C-term)

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8437c

Product Information

Application	WB, IHC, E
Primary Accession	Q6PHR2
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Clone Names	1404CT148.89.25
Calculated MW	53444

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 a mouse immunized with a KLH conjugated synthetic peptide between 435-468 amino acids from the C-terminal region of human ULK3.
Dilution	WB~~1:1000 IHC~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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	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

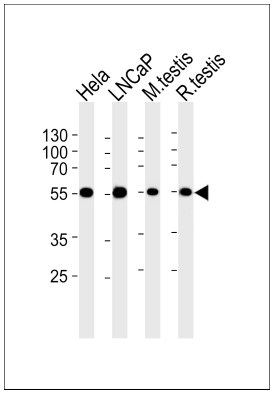
Background

Serine/threonine protein kinase that acts as a regulator of Sonic hedgehog (SHH) signaling and autophagy. Acts as a negative regulator of SHH signaling in the absence of SHH ligand: interacts with SUFU, thereby inactivating the protein kinase activity and preventing phosphorylation of GLI proteins (GLI1, GLI2 and/or GLI3). Positively regulates SHH signaling in the presence of SHH: dissociates from SUFU, autophosphorylates and mediates phosphorylation of GLI2, activating it and promoting its nuclear translocation. Phosphorylates in vitro GLI2, as well as GLI1 and GLI3, although less efficiently. Also acts as a regulator of autophagy: following cellular senescence, able to induce autophagy.

References

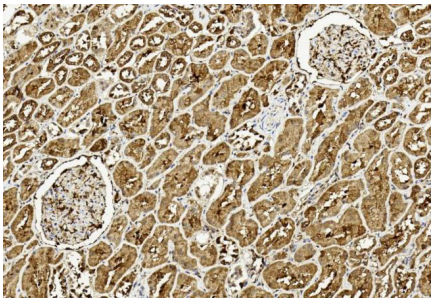
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Images



Western blot analysis of lysates from Hela, LNCaP cell line, mouse testis and rat testis tissue lysates(from left to right), using ULK3 Antibody (C-term)(Cat. #AM8437c). AM8437c was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35µg per lane.

Immunohistochemical analysis of paraffin-embedded Human kidney section using Pink1(Cat#am8437c). am8437c was diluted at 1:50 dilution. A undiluted



biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

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