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Anti-ULK3 Picoband Antibody

Catalog # ABO12206

Product Information

Application	WB, IHC-P
Primary Accession	Q6PHR2
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Serine/threonine-protein kinase ULK3(ULK3) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	25989
Other Names	Serine/threonine-protein kinase ULK3, 2.7.11.1, Unc-51-like kinase 3, ULK3
Calculated MW	53444
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm . Localizes to pre-autophagosomal structure during cellular senescence.
Tissue Specificity	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. .
Source	Eukaryota
Protein Name	Serine/threonine-protein kinase ULK3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at C-terminus of human ULK3 (427-454aa HTEVQNLMARAEYLKEQVKMRESRWEAD), different from the related mouse and rat sequences by four amino acids.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. APG1/unc-51/ULK1 subfamily.

Protein Information

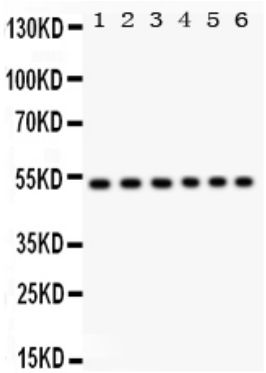
Name	ULK3 {ECO:0000303|PubMed:19878745, ECO:0000312|HGNC:HGNC:19703}
Function	Serine/threonine protein kinase that acts as a regulator of smoothened signaling and autophagy (PubMed:19279323, PubMed:19878745, PubMed:20643644, PubMed:31279575). Acts as a positive regulator of smoothened signaling in the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

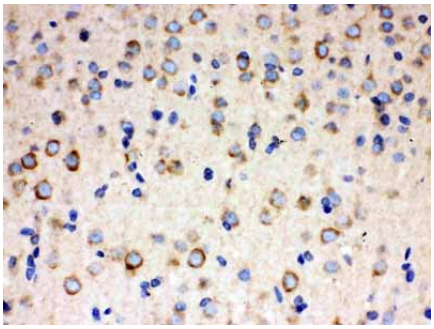
Serine/threonine protein kinase that acts as a regulator of Sonic hedgehog (SHH) signaling and autophagy. In search of potential homologues to Drosophila and human Fu, people have cloned human serine/threonine kinase ULK3 and assessed its ability to regulate GLI transcription factors, mediators of SHH signaling. And ULK3 enhances endogenous and over-expressed GLI1 and GLI2 transcriptional activity in cultured cells, as assessed by GLI-luciferase reporter assay. Besides that, ULK3 alters subcellular localization of GLI1, as assessed by immunofluorescent staining and immunoblotting assays. It is showed that ULK3 is an autophosphorylated kinase and phosphorylates GLI proteins in vitro. Also, ULK3 catalytical activity is crucial for its function in SHH pathway. It is demonstrated that ULK3 is widely expressed and its expression is higher in a number of tissues where Shh signaling is known to be active. The data suggest that serine/threonine kinase ULK3 is involved in the SHH pathway as a positive regulator of GLI proteins.

Images

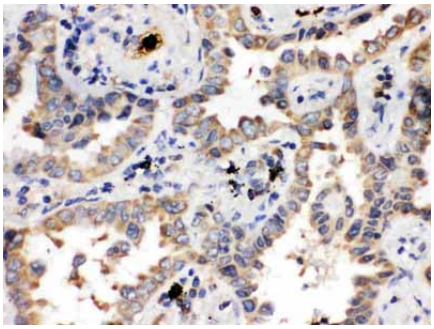
Anti- ULK3 Picoband antibody, ABO12206, Western blottingAll lanes: Anti ULK3 (ABO12206) at 0.5ug/mlLane



1: Rat Brain Tissue Lysate at 50ugLane 2: Rat Testis Tissue Lysate at 50ugLane 3: Mouse Brain Tissue Lysate at 50ugLane 4: Human Placenta Tissue Lysate at 50ugLane 5: 22RV1 Whole Cell Lysate at 40ugLane 6: SMMC Whole Cell Lysate at 40ugPredicted bind size: 53KDObserved bind size: 53KD



Anti- ULK3 Picoband antibody, ABO12206, IHC(P)IHC(P): Rat Brain Tissue



Anti- ULK3 Picoband antibody, ABO12206, IHC(P)IHC(P): Human Lung Cancer Tissue

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