

Anti-ULK3 Picoband Antibody
Catalog # ABO12206**Specification****Anti-ULK3 Picoband Antibody - Product Information**

Application	WB, IHC
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.

Anti-ULK3 Picoband Antibody - 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 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat
Western blot, 0.1-0.5 µg/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. .

Protein Name

Serine/threonine-protein kinase ULK3

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

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 reconstitution, 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.

Anti-ULK3 Picoband Antibody - Protein Information**Name** ULK3**Function**

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.

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

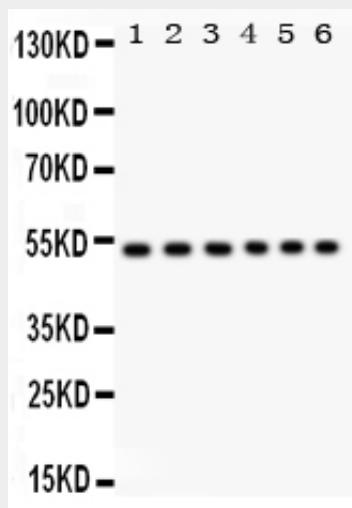
Anti-ULK3 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

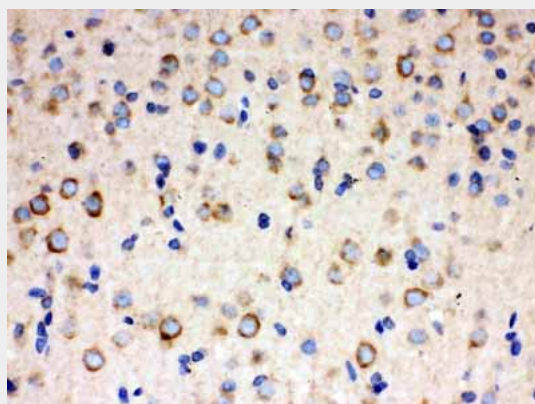
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

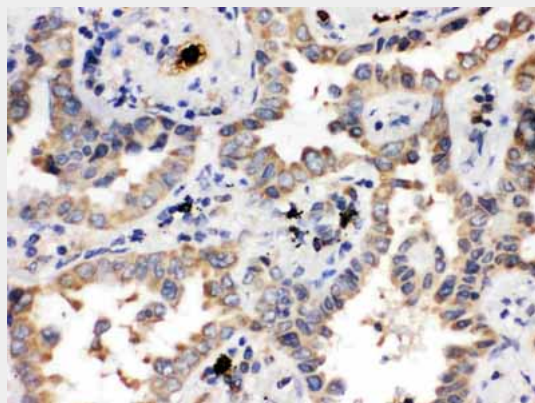
Anti-ULK3 Picoband Antibody - Images



Anti- ULK3 Picoband antibody, ABO12206, Western blotting All lanes: Anti ULK3 (ABO12206) at 0.5ug/ml Lane 1: Rat Brain Tissue Lysate at 50ug Lane 2: Rat Testis Tissue Lysate at 50ug Lane 3: Mouse Brain Tissue Lysate at 50ug Lane 4: Human Placenta Tissue Lysate at 50ug Lane 5: 22RV1 Whole Cell Lysate at 40ug Lane 6: SMMC Whole Cell Lysate at 40ug Predicted bind size: 53KD Observed 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

Anti-ULK3 Picoband Antibody - 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.