

**Anti-ULK3 Picoband Antibody**  
Catalog # ABO12206

**Specification**

**Anti-ULK3 Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">Q6PHR2</a>
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.<br>

**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<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**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 Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**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

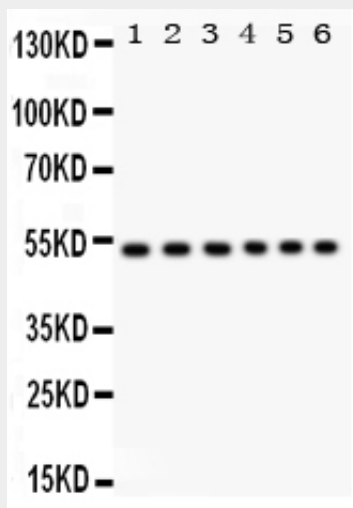
**Anti-ULK3 Picoband Antibody - Protocols**

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

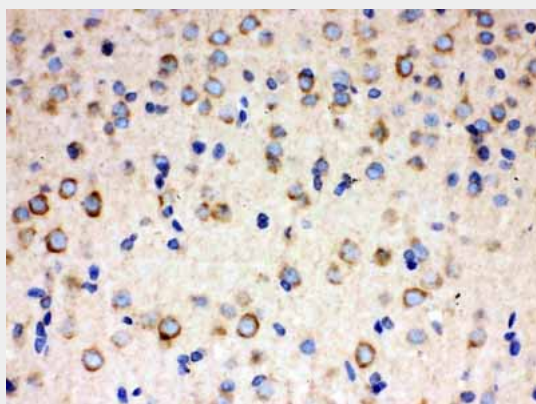
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

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

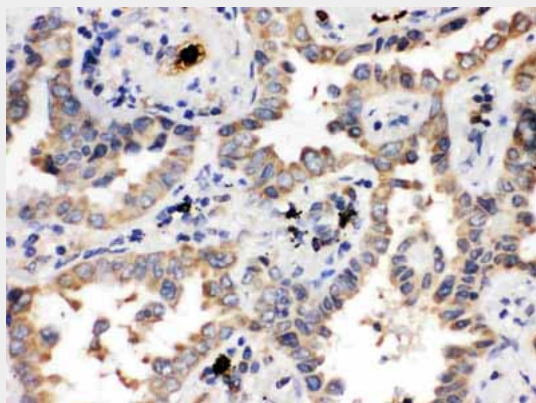
### Anti-ULK3 Picoband Antibody - Images



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.