

ULK4 Antibody
Catalog # ASC11730**Specification**

ULK4 Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	Q96C45
Other Accession	NP_060356 , 151301204
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 140 kDa
Application Notes	Observed: 165 kDa KDa ULK4 antibody can be used for detection of ULK4 by Western blot at 0.5 - 1 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.

ULK4 Antibody - Additional InformationGene ID **54986****Target/Specificity**

ULK4; ULK4 antibody is human and mouse reactive. Multiple isoforms of ULK4 are known to exist.

Reconstitution & Storage

ULK4 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

ULK4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ULK4 Antibody - Protein Information**Name** ULK4**Function**

May be involved in the remodeling of cytoskeletal components, such as alpha-tubulin, and in this way regulates neurite branching and elongation, as well as cell motility.

Tissue Location

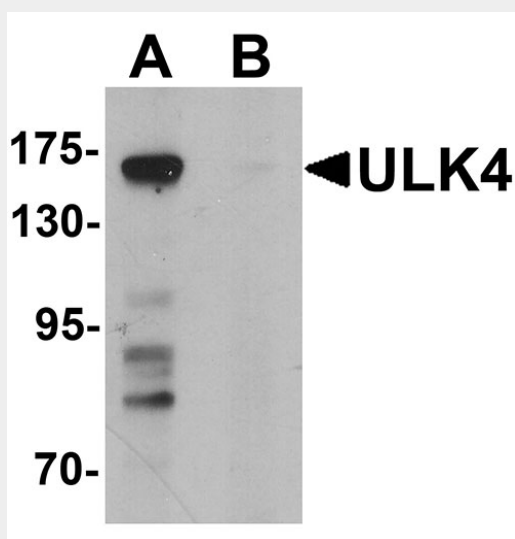
Expressed in the brain, mainly in postmitotic neurons, including GABAergic neurons, but not in astrocytes (at protein level).

ULK4 Antibody - Protocols

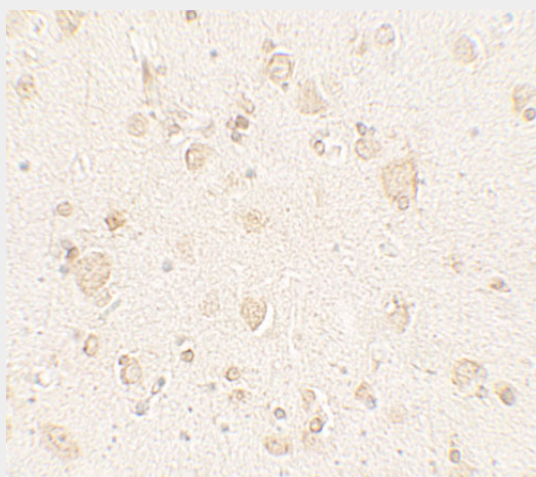
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

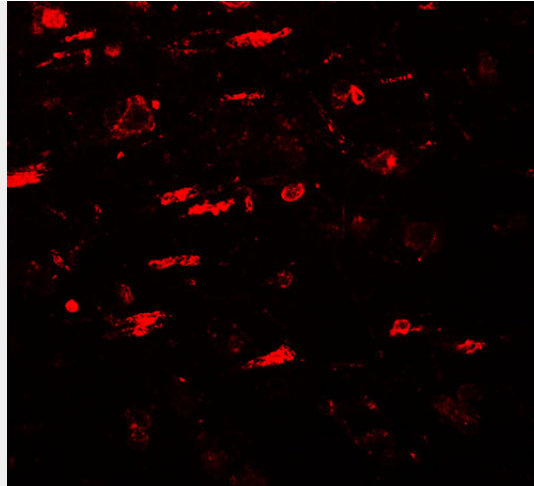
ULK4 Antibody - Images



Western blot analysis of ULK4 in 3T3 cell lysate with ULK4 antibody at 1 $\mu\text{g/ml}$ in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of ULK4 in human brain tissue with ULK4 antibody at 5 $\mu\text{g/mL}$.



Immunofluorescence of ULK4 in human brain tissue with ULK4 antibody at 20 µg/mL.

ULK4 Antibody - Background

ULK4 belongs to the Ser/Thr protein kinase superfamily and plays a role in the ATP-dependent phosphorylation of target proteins (1). Knockout of ULK genes results in a severe defect in the autophagy pathway (2). ULK4, like the other Unc-51-like kinases such as ULK1, ULK2 and ULK3, is highly conserved among eukaryotes (3). ULK4 has been implicated as a gene involved in the development of hydrocephalus (3). This neurologic disorder is being used in animal models to elucidate factors responsible for the excessive accumulation of cerebrospinal fluid in hydrocephalic humans (4).

ULK4 Antibody - References

Suzuki K, Kubota Y, Sekito T, et al. Hierarchy of Atg proteins in pre-autophagosomal structure organization. *Genes to Cells* 2007; 12:209-18.
Lee EJ and Tournier C. The requirement of uncoordinated 51-like kinase 1 (ULK1) and ULK2 in the regulation of autophagy. *Autophagy* 2011; 7:689-95.
Zhou X, Babu JR, da Silva S, et al. Unc-51-like kinase 1/2-mediated endocytic processes regulate filopodia extension and branching of sensory axons. *Proc. Natl. Acad. Sci. USA* 2007; 104:5842-7.
Vogel P, Read RW, Hansen GM, et al. Congenital hydrocephalus in genetically engineered mice. *Vet. Pathol.* 2012; 49:166-81.