10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FNIP1 Rabbit pAb

FNIP1 Rabbit pAb
Catalog # AP55088

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8TF40
Reactivity	Rat
Predicted	Dog, Human, Mouse, Chicken, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	130555
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human FNIP1
Epitope Specificity	101-200/1166
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	May be involved in energy and/or nutrient sensing through the AMPK and mTOR signaling pathways. May regulate phosphorylation of RPS6KB1.

Additional Information

Gene ID	96459
Other Names	Folliculin-interacting protein 1, FNIP1 {ECO:0000303|PubMed:17028174, ECO:0000312|HGNC:HGNC:29418}
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	FNIP1 {ECO:0000303|PubMed:17028174, ECO:0000312|HGNC:HGNC:29418}
Function	Binding partner of the GTPase-activating protein FLCN: involved in the cellular response to amino acid availability by regulating the non-canonical mTORC1 signaling cascade controlling the MiT/TFE factors TFEB and TFE3

(PubMed:17028174, PubMed:18663353, PubMed:24081491, PubMed:37079666). Required to promote FLCN recruitment to lysosomes and interaction with Rag GTPases, leading to activation of the non-canonical mTORC1 signaling (PubMed:24081491). In low-amino acid conditions, component of the lysosomal folliculin complex (LFC) on the membrane of lysosomes, which inhibits the GTPase-activating activity of FLCN, thereby inactivating mTORC1 and promoting nuclear translocation of TFEB and TFE3 (By similarity). Upon amino acid restimulation, disassembly of the LFC complex liberates the GTPase-activating activity of FLCN, leading to activation of mTORC1 and subsequent inactivation of TFEB and TFE3 (PubMed:37079666). Together with FLCN, regulates autophagy: following phosphorylation by ULK1, interacts with GABARAP and promotes autophagy (PubMed:25126726). Interaction with GABARAP also inhibits the non-canonical mTORC1 signaling cascade: GABARAP sequesters FLCN, thereby inactivating mTORC1 and promoting nuclear translocation of TFEB and TFE3 (PubMed:34597140). In addition to its role in mTORC1 signaling, also acts as a co-chaperone of HSP90AA1/Hsp90: following gradual phosphorylation by CK2, inhibits the ATPase activity of HSP90AA1/Hsp90, leading to activate both kinase and non-kinase client proteins of HSP90AA1/Hsp90 (PubMed:27353360, PubMed:30699359). Acts as a scaffold to load client protein FLCN onto HSP90AA1/Hsp90 (PubMed:27353360). Competes with the activating co-chaperone AHSA1 for binding to HSP90AA1, thereby providing a reciprocal regulatory mechanism for chaperoning of client proteins (PubMed:27353360). Also acts as a core component of the reductive stress response by inhibiting activation of mitochondria in normal conditions: in response to reductive stress, the conserved Cys degron is reduced, leading to recognition and polyubiquitylation by the CRL2(FEM1B) complex, followed by proteasomal (By similarity). Required for B-cell development (PubMed:32905580).

Cellular Location

Lysosome membrane. Cytoplasm, cytosol. Note=Localizes to lysosome membrane in amino acid-depleted conditions and relocalizes to the cytosol upon refeeding (PubMed:29848618). Colocalizes with FLCN in the cytoplasm (PubMed:18663353).

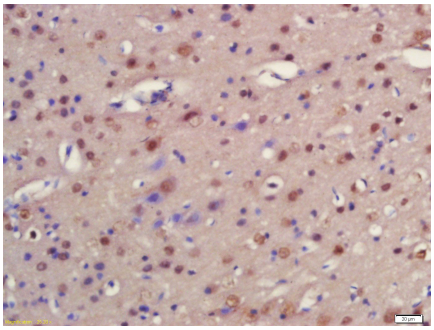
Tissue Location

Strong expression is found in the heart, liver placenta, muscle, nasal mucosa, salivary gland and uvula and moderate expression in kidney and lung. Higher levels detected in clear cell renal cell carcinoma (RCC) and chromophobe RCC than in normal kidney tissue. Expressed in peripheral blood mononuclear cells (PubMed:32181500).

Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Images



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-FNIP1 Polyclonal Antibody, Unconjugated(AP55088) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and

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