FLCN Rabbit pAb

CatalogNo: YN6155

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB

MW
- 64kD (Calculated)

Isotype
- IgG

Recommended Dilution Ratios

WB 1:500-2000

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	Synthesized peptide derived from human FLCN
Specificity	This antibody detects endogenous levels of FLCN at Human, Mouse,Rat

Target Information

Gene name	FLCN BHD

Protein Name Folliculin (BHD skin lesion fibrofolliculoma protein) (Birt-Hogg-Dube syndrome protein)

Organism	Gene ID	UniProt ID
Human	201163;	Q8NFG4;
Mouse	216805;	Q8QZS3;
Rat	303185;	Q76JQ2;

Cellular Localization Lysosome membrane . Cytoplasm, cytosol . Cell projection, cilium . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Cytoplasm, cytoskeleton, spindle . Nucleus . Localizes to lysosome membrane in amino acid-depleted conditions and relocalizes to the cytosol upon refeeding (PubMed:24095279, PubMed:29848618, PubMed:31672913). Colocalizes with FNIP1 and FNIP2 in the cytoplasm (PubMed:17028174, PubMed:18663353). Also localizes to motile and non-motile cilia, centrosomes and the mitotic spindle (PubMed:23784378). .

Tissue specificity Expressed in most tissues tested, including skin, lung, kidney, heart, testis and stomach.

Function Multi-functional protein, involved in both the cellular response to amino acid availability and in the regulation of glycolysis . GTPase-activating protein that plays a key role in the cellular response to amino acid availability through regulation of the mTORC1 signaling cascade controlling the MiT/TFE factors TFEB and TFE3 . Regulates glycolysis by binding to lactate dehydrogenase LDHA, acting as an uncompetitive inhibitor . Activates mTORC1 by acting as a GTPase-activating protein: specifically stimulates GTP hydrolysis by RRAGC/RagC or RRAGD/RagD, promoting the conversion to the GDP-bound state of RRAGC/RagC or RRAGD/RagD, and thereby activating the kinase activity of mTORC1 . The GTPase-activating activity is inhibited during starvation and activated in presence of nutrients . Acts as a key component for mTORC1-dependent control of the MiT/TFE factors TFEB and TFE3, while it is not involved in mTORC1-dependent phosphorylation of canonical RPS6KB1/S6K1 and EIF4EBP1/4E-BP1 . In low-amino acid conditions, the lysosomal folliculin complex (LFC) is formed on the membrane of lysosomes, which inhibits the GTPase-activating activity of FLCN, inactivates mTORC1 and maximizes nuclear translocation of TFEB and TFE3 . Upon amino acid restimulation, RRAGA/RagA (or RRAGB/RagB) nucleotide exchange promotes disassembly of the LFC complex and liberates the GTPase-activating activity of FLCN, leading to activation of mTORC1 and subsequent cytoplasmic retention of TFEB and TFE3 . Indirectly acts as a positive regulator of Wnt signaling by promoting mTOR-dependent cytoplasmic retention of MiT/TFE factor TFE3 . Required for the exit of hematopoietic stem cell from pluripotency by promoting mTOR-dependent cytoplasmic retention of TFE3, thereby increasing Wnt signaling . Acts as an inhibitor of browning of adipose tissue by regulating mTOR-dependent cytoplasmic retention of TFE3 (By similarity). In response to flow stress, regulates STK11/LKB1 accumulation and mTORC1 activation through primary cilia: may act by recruiting STK11/LKB1 to primary cilia for activation of AMPK resided at basal bodies, causing mTORC1 down-regulation . Together with FNIP1 and/or FNIP2, regulates autophagy: following phosphorylation by ULK1, interacts with GABARAP and promotes autophagy . Required for starvation-induced perinuclear clustering of lysosomes by promoting association of RILP with its effector RAB34 .

Validation Data

Contact information

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Please scan the QR code to access additional product information:
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