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CYLD Recombinant Rabbit mAb

Catalog # AP100096

Product Information

Application	WB, IHC-P, IHC-F, IF, IP, E
Primary Accession	Q9NQC7
Other Accession	Q9NQC7
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	107316
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase C67 family. Contains 3 CAP-Gly domains.
SUBUNIT	Interacts (via CAP-Gly domain) with IKBKG/NEMO (via proline-rich C-terminal region). Interacts with TRAF2 and TRIP. Interacts with PLK1, DVL1, DVL3, MAVS, TBK1, IKKE and DDX58. Interacts (via CAP-Gly domain) with microtubules. Interacts with HDAC6 and BCL3. Interacts with SQSTM1 and MAP3K7. Identified in a complex with TRAF6 and SQSTM1 (By similarity).
Post-translational modifications	Phosphorylated on several serine residues by IKKA and/or IKKB in response to immune stimuli. Phosphorylation requires IKBKG. Phosphorylation abolishes TRAF2 deubiquitination, interferes with the activation of Jun kinases, and strongly reduces CD40-dependent gene activation by NF-kappa-B.
DISEASE	Defects in CYLD are the cause of familial cylindromatosis (FCYL) [MIM:132700]; also known as Ancell-Spiegler cylindromas or turban tumor syndrome or dermal eccrine cylindromatosis. CYLD is an autosomal dominant and highly tumor type-specific disorder. The tumors (known as cylindromas because of their characteristic microscopic architecture) are believed to arise from or recapitulate the appearance of the eccrine or apocrine cells of the skin that secrete sweat and scent respectively. Cylindromas arise predominantly in hairy parts of the body with approximately 90% on the head and neck. The development of a confluent mass which may ulcerate or become infected has led to the designation 'turban tumor syndrome'. The skin tumors show differentiation in the direction of hair structures, hence the synonym trichoepithelioma. Defects in CYLD are the cause of multiple familial trichoepithelioma type 1 (MFT1) [MIM:601606]; also known as epithelioma adenoides cysticum of Brooke (EAC) or hereditary multiple benign cystic epithelioma or Brooke-Fordyce trichoepitheliomas. MFT1 is an autosomal dominant dermatosis characterized by the presence of many skin tumors predominantly on the face. Since histologic examination shows dermal aggregates of basaloid cells with connection to or differentiation toward hair follicles, this disorder has been thought to represent a benign hamartoma of the pilosebaceous apparatus. Trichoepitheliomas can degenerate into basal cell carcinoma. Defects in CYLD are the cause of Brooke-Spiegler syndrome (BRSS) [MIM:605041]. BRSS is an autosomal dominant disorder characterized by the appearance of multiple skin appendage tumors such as cylindroma, trichoepithelioma, and spiradenoma. These tumors are typically located in the head and neck region, appear in early adulthood, and gradually increase in

Background Descriptions	size and number throughout life. This gene is encodes a cytoplasmic protein with three cytoskeletal-associated protein-glycine-conserved (CAP-GLY) domains that functions as a deubiquitinating enzyme. Mutations in this gene have been associated with cylindromatosis, multiple familial trichoepithelioma, and Brooke-Spiegler syndrome. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008],

Additional Information

Gene ID	1540
Other Names	CYLD_BOVIN; CYLD; Deubiquitinating enzyme CYLD; Ubiquitin thioesterase CYLD; Ubiquitin-specific-processing protease CYLD; 3.4.19.12; CYLD1; CYLD_HUMAN; KIAA0849; CYLD_MOUSE; CYLD_RAT; CYLD lysine 63 deubiquitinase; cylindromatosis (turban tumor syndrome); ubiquitin specific peptidase like 2; Ubiquitin carboxyl-terminal hydrolase CYLD
Dilution	IHC-P=1:50-200,IHC-F=1:50-200,WB=1:500-2000,IF=1:50-200,ELISA=1:5000-10000,IP=1:50-200
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	CYLD {ECO:0000303|PubMed:12917689, ECO:0000312|HGNC:HGNC:2584}
Function	Deubiquitinase that specifically cleaves 'Lys-63'- and linear 'Met-1'-linked polyubiquitin chains and is involved in NF-kappa-B activation and TNF-induced necroptosis (PubMed:18313383, PubMed:18636086, PubMed:19481526, PubMed:26670046, PubMed:26997266, PubMed:27458237, PubMed:27591049, PubMed:27746020, PubMed:29291351, PubMed:32185393). Negatively regulates NF-kappa-B activation by deubiquitinating upstream signaling factors (PubMed:12917689, PubMed:12917691, PubMed:19481526, PubMed:32185393). Contributes to the regulation of cell survival, proliferation and differentiation via its effects on NF-kappa-B activation (PubMed:12917690). Negative regulator of Wnt signaling (PubMed:20227366). Inhibits HDAC6 and thereby promotes acetylation of alpha-tubulin and stabilization of microtubules (PubMed:19893491). Plays a role in the regulation of microtubule dynamics, and thereby contributes to the regulation of cell proliferation, cell polarization, cell migration, and angiogenesis (PubMed:18222923, PubMed:20194890). Required for normal cell cycle progress and normal cytokinesis (PubMed:17495026, PubMed:19893491). Inhibits nuclear translocation of NF-kappa-B (PubMed:18636086). Plays a role in the regulation of inflammation and the innate immune response, via its effects on NF-kappa-B activation (PubMed:18636086). Dispensable for the maturation of intrathymic natural killer cells, but required for the continued survival of immature natural killer cells (By similarity). Negatively regulates TNFRSF11A signaling and osteoclastogenesis (By similarity). Involved in the regulation of ciliogenesis, allowing ciliary basal bodies to migrate and dock to the plasma membrane; this process does not depend on NF-kappa-B activation (By similarity). Ability to remove linear ('Met-1'-linked) polyubiquitin chains regulates innate immunity and TNF-induced necroptosis: recruited to the

LUBAC complex via interaction with SPATA2 and restricts linear polyubiquitin formation on target proteins (PubMed:26670046, PubMed:26997266, PubMed:27458237, PubMed:27591049). Regulates innate immunity by restricting linear polyubiquitin formation on RIPK2 in response to NOD2 stimulation (PubMed:26997266). Involved in TNF-induced necroptosis by removing linear ('Met-1'-linked) polyubiquitin chains from RIPK1, thereby regulating the kinase activity of RIPK1 (By similarity). Negatively regulates intestinal inflammation by removing 'Lys-63' linked polyubiquitin chain of NLRP6, thereby reducing the interaction between NLRP6 and PYCARD/ASC and formation of the NLRP6 inflammasome (By similarity). Does not catalyze deubiquitination of heterotypic 'Lys-63'-/'Lys-48'-linked branched ubiquitin chains (PubMed:27746020). Removes 'Lys-63' linked polyubiquitin chain of MAP3K7, which inhibits phosphorylation and blocks downstream activation of the JNK-p38 kinase cascades (PubMed:29291351). Also removes 'Lys-63'-linked polyubiquitin chains of MAP3K1 and MA3P3K3, which inhibit their interaction with MAP2K1 and MAP2K2 (PubMed:34497368).

Cellular Location

Cytoplasm. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q80TQ2}. Note=Detected at the microtubule cytoskeleton during interphase. Detected at the midbody during telophase. During metaphase, it remains localized to the centrosome but is also present along the spindle (PubMed:25134987) {ECO:0000250|UniProtKB:Q80TQ2, ECO:0000269|PubMed:25134987}

Tissue Location

Detected in fetal brain, testis, and skeletal muscle, and at a lower level in adult brain, leukocytes, liver, heart, kidney, spleen, ovary and lung. Isoform 2 is found in all tissues except kidney.

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