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COMMD1 Rabbit pAb

Catalog # AP97385

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8N668
Other Accession	Q8N668
Reactivity	Human, Mouse
Predicted	Rat, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	21178
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human COMMD1/MURR1
Epitope Specificity	95-190/190
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 COMM domain.
SUBUNIT	Monomer and homodimer. Interacts (via COMM domain) with COMMD2, COMMD3, COMMD4, COMMD5, COMMD6, COMMD7, COMMD8 and COMMD10 (via COMM domain). Identified in a complex with an E3 ubiquitin ligase complex composed of TCEB1/elongin C, CUL2, SOCS1 and RBX1. Interacts directly with SOCS1 and CUL2. Interacts directly the N-terminal region of ATP7B. Interacts with CCS, CDKN2A, RELA and NFKBIB. Identified in a complex with NF-kappa-B. Interacts with CLU.
Post-translational modifications	Ubiquitinated; undergoes both 'Lys-63'- and 'Lys-48'-linked polyubiquitination. Ubiquitinated by XIAP, leading to its proteasomal degradation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Promotes ubiquitination of NF-kappa-B subunit RELA and its subsequent proteasomal degradation. Down-regulates NF-kappa-B activity. Down-regulates SOD1 activity by interfering with its homodimerization. Plays a role in copper ion homeostasis. Can bind one copper ion per monomer. May function to facilitate biliary copper excretion within hepatocytes. Tissue specificity: Ubiquitous. Highest expression in the liver, with lower expression in brain, lung, placenta, pancreas, small intestine, heart, skeletal muscle, kidney and placenta.

Additional Information

Gene ID	150684
Other Names	C2orf5; MURR1; U2/Mu; COMD1_HUMAN; COMMD1; Protein Murr1; COMD1_MOUSE; copper metabolism domain containing 1; chromosome 2 open reading frame 5 (MURR1); copper metabolism (Murr1) domain

	containing 1; copper metabolism gene MURR1; COMM domain containing 1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=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	COMMD1
Synonyms	C2orf5, MURR1
Function	Scaffold protein in the commander complex that is essential for endosomal recycling of transmembrane cargos; the commander complex is composed of the CCC subcomplex and the retriever subcomplex (PubMed:37172566, PubMed:38459129). Can modulate activity of cullin- RING E3 ubiquitin ligase (CRL) complexes by displacing CAND1; in vitro promotes CRL E3 activity and dissociates CAND1 from CUL1 and CUL2 (PubMed:21778237). Promotes ubiquitination of NF-kappa-B subunit RELA and its subsequent proteasomal degradation. Down-regulates NF-kappa-B activity (PubMed:15799966, PubMed:17183367, PubMed:20048074). Involved in the regulation of membrane expression and ubiquitination of SLC12A2 (PubMed:23515529). Modulates Na(+) transport in epithelial cells by regulation of apical cell surface expression of amiloride-sensitive sodium channel (ENaC) subunits and by promoting their ubiquitination presumably involving NEDD4L. Promotes the localization of SCNN1D to recycling endosomes (PubMed:14645214, PubMed:20237237, PubMed:21741370). Promotes CFTR cell surface expression through regulation of its ubiquitination (PubMed:21483833). Down-regulates SOD1 activity by interfering with its homodimerization (PubMed:20595380). Plays a role in copper ion homeostasis. Involved in copper-dependent ATP7A trafficking between the trans-Golgi network and vesicles in the cell periphery; the function is proposed to depend on its association within the CCC complex and cooperation with the WASH complex on early endosomes (PubMed:25355947). Can bind one copper ion per monomer (PubMed:17309234). May function to facilitate biliary copper excretion within hepatocytes. Binds to phosphatidylinositol 4,5-bisphosphate (PtdIns(4,5)P2) (PubMed:18940794). Involved in the regulation of HIF1A- mediated transcription; competes with ARNT/Hif-1-beta for binding to HIF1A resulting in decreased DNA binding and impaired transcriptional activation by HIF-1 (PubMed:20458141). Negatively regulates neuroblastoma G1/S phase cell cycle progression and cell proliferation by stimulating ubiquitination of NF-kappa-B subunit RELA and NF-kappa-B degradation in a FAM107A- and actin-dependent manner (PubMed:28604741).
Cellular Location	Nucleus. Cytoplasm Endosome membrane. Cytoplasmic vesicle. Early endosome. Recycling endosome Note=Shuttles between nucleus and cytosol. Detected in perinuclear foci that may be aggresomes containing misfolded, ubiquitinated proteins
Tissue Location	Ubiquitous. Highest expression in the liver, with lower expression in brain, lung, placenta, pancreas, small intestine, heart, skeletal muscle, kidney and placenta. Down-regulated in cancer tissues.

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