

Product Specification Sheet

Product: Anti-Human CAND2 (C-terminal specific) [RABBIT]

Code: 100-401-A12

Lot #: 15411

Size: 100 µl

Physical State: Liquid (sterile filtered)

Protein Concentration: 85 mg/ml (by Refractometry)

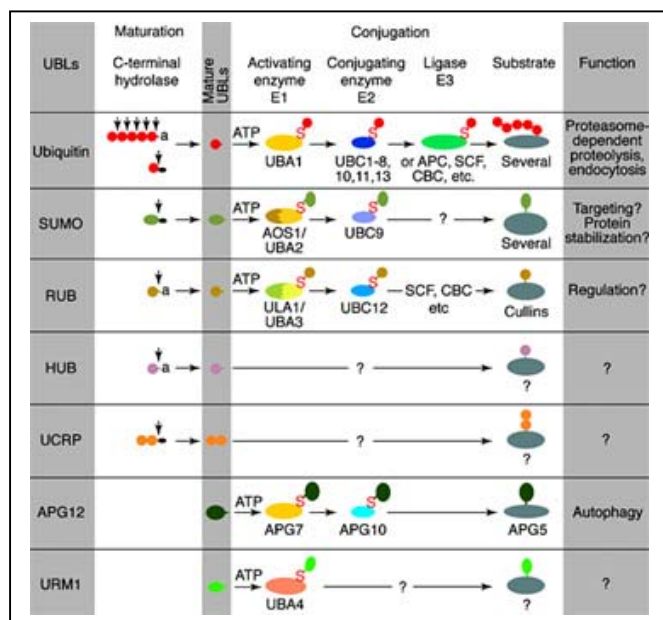
Buffer: None

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Storage Conditions: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening.

Background Information: CAND2 is also known as TIP120B, and TATA-binding protein-interacting protein 120B. While both CAND1 (TIP120A) and CAND2 (TIP120B) are TATA-binding proteins and form complexes with various nuclear proteins involved in the control of eukaryotic gene transcription, CAND2 (TIP120B) is expressed specifically in muscle and heart tissue. This is contrary to the ubiquitous expression of CAND1 (TIP120A). TIP120 homologs exist in various higher eukaryotes including *D. melanogaster*, *C. elegans*, and *A. thaliana*. TIP120B is 60% identical in amino acid sequence to TIP120A.



Application Note(s): This antibody reacts with human, rat and mouse CAND2 by western blot and immunoprecipitation. The antibody immunoprecipitates *in vitro* translated protein and protein from transfected cell lysates (using HeLa and NIH-3T3, and others). Coimmunoprecipitation of related proteins has not been tested. A 125.4 kDa band corresponding to human CAND2 is detected. CAND2 is specifically expressed in muscle and heart tissue. Researchers should determine optimal titers for other applications.

Figure. Conjugation pathways for ubiquitin and ubiquitin-like modifiers (UBLs). Most modifiers mature by proteolytic processing from inactive precursors (a; amino acid). Arrowheads point to the cleavage sites. Ubiquitin is expressed either as polyubiquitin or as a fusion with ribosomal proteins. Conjugation requires activating (E1) and conjugating (E2) enzymes that form thioesters (S) with the modifiers. Modification of cullins by RUB involves SCF(SKP1/cullin-1/F-box protein) /CBC(cullin-2/elongin B/elonginC) -like E3 enzymes that are also involved in ubiquitination. In contrast to ubiquitin, the UBLs do not seem to form multi-UBL chains. UCRP(ISG15) resembles two ubiquitin moieties linked head-to-tail. Whether HUB1 functions as a modifier is currently unclear. APG12 and URM1 are distinct from the other modifiers because they are unrelated in sequence to ubiquitin. Data contributed by S.Jentsch, see references below.

Recommended Dilution(s):

ELISA

1:2,000 - 1:10,000

WESTERN BLOT

1:500 - 1:1,000

IMMUNOHISTOCHEMISTRY

User Optimized

OTHER APPLICATIONS

User Optimized

Purity and Specificity: This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human, rat and mouse CAND2/TIP120B. Cross reactivity does occur with human, rat and mouse CAND1/TIP120A. Cross reactivity with CAND2 from other sources is not known.

Immunogen: This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 1130-1143 of Human CAND2/TIP120B (C-terminal) coupled to KLH.

Protein Sequence: Human CAND2 (TIP120B) (1143 aa 125.4 kDa)

1	mstaafhiss	llekmtssdk	dfrfmatsdl	mseqkdsiq	ldedserkvv	kmlrlledk
61	ngevqnlavk	wlgvplgafh	asllhcllpq	lssprlavrk	ravgalghla	aacstdlfve
121	ladhlldrlp	gprvptspta	irtliqclgs	vgrqaghrlg	ahldrlvplv	edfnclddde
181	lresclqafe	afirkcpkem	gphvpnvtsl	clqyikhdpn	ynydsdedee	qmetedsefs
241	eqesedeysd	dddmswkvr	aaakciaali	ssrpdllpdf	hctlapvlir	rfkereenvk
...						
901	vkflisdqph	pidplksfi	gefmeslqdp	dlnvrratla	ffnsavhnkp	slvrldlddi
961	lpilyqetki	rrdlirevem	gpfkhtvddg	ldvrkaafec	mysllesclg	qldicefinh
1021	vedglkdhyd	irmltfimva	rlatcpcapv	lqrvdrlipe	lratctakvk	agsvkqefek
1081	qdelkrsamr	avaalltipe	vgkspimadf	ssqirsnpel	aalfesiqkd	sasapstdsm
1141	els					

Related Link(s): Accession # [XP_371617](#)

Specific Reference(s):

Feng S, Shen Y, Sullivan J, Rubio C, Xiong Y (2004) The Arabidopsis thaliana CAND1, an unmodified Cul1 interacting protein, is involved in multiple developmen pathways controlled by ubiquitin/proteasome-mediated protein degradation. *Plant Cell in press*.

Cheng Y, Dai X, Zhao Y. (2004) AtCAND1, a HEAT-repeat protein that participates in auxin signaling in Arabidopsis. *Plant Physiol.* **135**(2):1020-6.

Liu J, Furukawa M, Matsumoto T, Xiong Y.(2002) NEDD8 modification of CUL1 dissociates p120(CAND1), an inhibitor of CUL1-SKP1 binding and SCF ligases. *Mol Cell.* **10**(6):1511-8.

Makino Y, et al.(1999) TATA-Binding protein-interacting protein 120, TIP120, stimulates three classes of eukaryotic transcription via a unique mechanism. *Mol Cell Biol.* **19**(12):7951-60.

Makino Y, Yoshida T, Yogosawa S, Tanaka K, Muramatsu M, Tamura TA. (1999) Multiple mammalian proteasomal ATPases, but not proteasome itself, are associated with TATA-binding protein and a novel transcriptional activator, TIP120. *Genes Cells.* **4**(9):529-39.

Oshikawa K, Matsumoto M, Yada M, Kamura T, Hatakeyama S, Nakayama KI. Preferential interaction of TIP120A with Cul1 that is not modified by NEDD8 and not associated with Skp1. *Biochem Biophys Res Commun.* **303**(4):1209-16.

Zheng J, Yang X, Harrell JM, Ryzhikov S, Shim EH, Lykke-Andersen K, Wei N, Sun H, Kobayashi R, Zhang H. (2002) CAND1 binds to unnedylated CUL1 and regulates the formation of SCF ubiquitin E3 ligase complex. *Mol Cell.* **10**(6):1519-26.

General Reference(s):

Jentsch S, Pyrowolakis G. (2000) Ubiquitin and its kin: how close are the family ties? *Trends Cell Biol.* **10**(8):335-42.

Related Product(s):

#100-401-A01 Anti-Human Cul1 (RABBIT)	#100-401-A08 Anti-Human SLP1 (RABBIT)	#100-401-A15 Anti-Human APC11 (RABBIT)
#100-401-A02 Anti-Human Cul2 (RABBIT)	#100-401-A09 Anti-Human DDB1 (RABBIT)	#100-401-A15 Anti-Human APC11 (RABBIT)
#100-401-A03 Anti-Human Cul3 (RABBIT)	#100-401-A10 Anti-Human DDB2 (RABBIT)	#100-401-A15 Anti-Human APC2 (RABBIT)
#100-401-A04 Anti-Human Cul4A (RABBIT)	#100-401-A11 Anti-Human CAND1 (RABBIT)	#100-401-A09 Anti-Human cdc20 (RABBIT)
#100-401-A05 Anti-Human Cul5 (RABBIT)	#100-401-A12 Anti-Human CAND2 (RABBIT)	#611-703-127 HRP Dnky-a-Rabbit IgG [H&L]
#100-401-A06 Anti-Human Cul7 (RABBIT)	#100-401-A13 Anti-Human ROC1 (RABBIT)	#611-132-122 IRDye800 Gt-a-Rabbit IgG [H&L]
#100-401-A07 Anti-Human PARC (RABBIT)	#100-401-A14 Anti-Human ROC2 (RABBIT)	

USDA Certification: All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.