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### Product Specification Sheet

**Product:** Affinity Purified Anti-CDC27 pS427 [Rabbit]

**Code:** 600-401-866

**Lot #:** 15893cr

**Size:** 100 µg

**Physical State:** Liquid (sterile filtered)

**Antibody Concentration:** 2.0 mg/ml (by UV absorbance at 280 nm)

**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

**Stabilizer:** None

**Preservative:** 0.01% (w/v) Sodium Azide

**Storage Conditions:** Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

**Background Information:** Human CDC27 (also called Cell division cycle protein 27 homolog, CDC27Hs and H-NUC) shares strong similarity with *Saccharomyces cerevisiae* protein Cdc27. This protein is a component of anaphase-promoting complex (APC), which is composed of eight protein subunits and highly conserved in eukaryotic cells. APC catalyzes the formation of a cyclin B-ubiquitin conjugate that is responsible for the ubiquitin-mediated proteolysis of B-type cyclins. This protein and 3 other members of the APC complex contain the TPR (tetra-tricopeptide repeat), a protein domain important for protein-protein interaction. This protein was shown to interact with mitotic checkpoint proteins including Mad2, p55CDC and BUBR1, and thus may be involved in controlling the timing of mitosis.

**Application Note(s):** This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 91 kDa in size corresponding to CDC27 by western blotting in the appropriate cell lysate or extract. Less than 1% reactivity is observed against the non-phosphorylated form of the immunizing peptide. This antibody is phospho specific for pS427 of CDC27.

<b>Recommended Dilutions:</b>	<b>ELISA</b>	1:5,000 - 1:25,000
	<b>WESTERN BLOT</b>	1:500 - 1:2,500
	<b>IF MICROSCOPY</b>	User Optimized
	<b>OTHER APPLICATIONS</b>	User Optimized

**Purity and Specificity:** : This affinity purified antibody is directed against the phosphorylated form of human CDC27 at the pS427 residue. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross adsorbed against the non-phosphorylated form of the immunizing peptide. Reactivity occurs against human CDC27 pS427 protein and the antibody is specific for the phosphorylated form of the protein. Reactivity with non-phosphorylated human CDC27 is minimal by ELISA. The antibody does not cross-react with CDC27 phosphorylated at other sites. A BLAST analysis was used to suggest reactivity with this protein from human, rat, dog, chicken and chimpanzee based on 100% homology for the immunogen sequence. Cross reactivity with CDC27 protein from mouse may occur as sequence homology varies by one amino acid residue in this sequence (89% homology). Cross reactivity with CDC27 homologues from other sources has not been determined.

**Relevant Link(s):** Swiss Prot: [P30260](#) NCBI Link [NP\\_001247](#)

**Protein Sequence:** Human CDC27, 824 aa, predicted MW 91.8 kDa

1	mtvlqepvqa	aiwqalnhya	yrdavflaer	lyaevhseea	lflatcyyr	sgkaykayrl
61	lkghscttpq	ckyllakccv	dlsklaeegq	ilsggvfnkq	kshddivtef	gdsacftlsl
121	lghvycktdr	lakgsecyqk	slslnpflws	pfeslceige	kpdpdqtkkf	tslqnfsncl
181	pnscttqvpn	hslshrqpet	vtetpqdti	elnrlnless	nskyslntds	svsyidsavi
241	spdtvplgtg	tsilskqvqn	kpktgrslig	gpaalspltp	sfgilpletp	spgdgsylqn
301	ytntppvidv	pstgapskks	varigqgtk	svfsqsgnsr	evtpilaqtq	ssgpqsttp
361	qvlspitisp	pnalprssr	lftsdsttk	enskkkkmkf	ppkipnrktk	sktnkggitq
421	<b>pnind<del>s</del>leit</b>	kldssiiseg	kistitpqiq	afnlqaaaa	glmsllremg	kgylalcsyn
481	ckeainilsh	lpshhyntgw	vlcqigrayf	elseymqaer	ifsevrrien	yrvegmeiys
541	ttlwhlqkdv	alsviskdlit	dmdknspeaw	caagnfcslq	rehdiaikff	qraiqvdpny
601	ayaytlighe	fvteeldka	lacfrnairv	nprhynawyg	lgmiiyykqek	fslaemhfqk
661	aldinpqssv	llchigvvqh	alkksekald	tlnkavidp	knplckfhra	svlfaneyk
721	salqeelk	qivpkleslv	fligkvykkl	gqthlalmnf	swamlddpkg	annjikeaid
781	krylpddeep	itqeeqimgt	desqessmtd	addtqlhaae	sdef	

**Immunogen:** This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding aa 422-430 of Human CDC27.

**General References:**

Gabellini,D., Colaluca,I.N., Vodermaier,H.C., Biamonti,G., Giacca,M., Falaschi,A., Riva,S. and Peverali,F.A. (2003) Early mitotic degradation of the homeoprotein HOXC10 is potentially linked to cell cycle progression. *EMBO J.* **22** (14), 3715-3724.

Topper,L.M., Campbell,M.S., Tugendreich,S., Daum,J.R., Burke,D.J., Hieter,P. and Gorbsky,G.J. (2002) The dephosphorylated form of the anaphase-promoting complex protein Cdc27/Apc3 concentrates on kinetochores and chromosome arms in mitosis. *Cell Cycle* **1** (4), 282-292.

Wassmann,K. and Benezra,R. (1998) Mad2 transiently associates with an APC/p55Cdc complex during mitosis. *Proc. Natl. Acad. Sci. U.S.A.* **95** (19), 11193-11198.

Yu,H., Peters,J.M., King,R.W., Page,A.M., Hieter,P. and Kirschner,M.W. (1998) Identification of a cullin homology region in a subunit of the anaphase-promoting complex. *Science* **279** (5354), 1219-1222.

Ho,P.P. et al. (1995) Localization of the human homolog of the yeast cell division control 27 gene (CDC27) proximal to ITGB3 on human chromosome 17q21.3. *Somat. Cell Mol. Genet.* **21** (5), 351-355.

Tugendreich,S., Tomkiel,J., Earnshaw,W. and Hieter,P. (1995) CDC27Hs colocalizes with CDC16Hs to the centrosome and mitotic spindle and is essential for the metaphase to anaphase transition. *Cell* **81** (2), 261-268.

Chen,P.L., Ueng,Y.C., Durfee,T., Chen,K.C., Yang-Feng,T. and Lee,W.H. (1995) Identification of a human homologue of yeast nuc2 which interacts with the retinoblastoma protein in a specific manner. *Cell Growth Differ.* **6** (2), 199-210.

Tugendreich,S., Boguski,M.S., Seldin,M.S. and Hieter,P. (1993) Linking yeast genetics to mammalian genomes: identification and mapping of the human homolog of CDC27 via the expressed sequence tag (EST) data base. *Proc. Natl. Acad. Sci. U.S.A.* **90** (21), 10031-10035.

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#611-703-127	Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10
#611-132-122	IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10
#MB-070	Blocking Buffer for Fluorescent Western Blotting
#KIA-003	<b>MaxTag</b> <sup>TM</sup> Anti-RABBIT IgG Kit for Immunoblotting
#MB-070	Blocking Buffer for Fluorescent Western Blotting

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