



Qty: 100 µg/400 µl

Rabbit anti-CUL1

Catalog No. 71-8700

Lot No. See product label

Rabbit anti-CUL1

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at 0.25 mg/ml in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. The antibody is epitope affinity-purified from rabbit antiserum.

POLYCLONAL ANTIBODY DESIGNATION (PAD): ZL18

IMMUNOGEN

An 11 amino acid synthetic peptide derived from the extreme C-terminus of the human CUL1 protein. This peptide sequence is identical to *Drosophila* CUL1 (LIN-19) in 9/11 positions and in 7/11 residues with the CUL1 *C. elegans* and *Dictyostelium discoideum* homologs.

SPECIFICITY

This antibody is specific for the 86 kDa CUL-1 protein and does not cross react with the related CUL2 protein. Antibody reactivity has been confirmed by Western blotting and immunoprecipitation using both recombinant CUL1 protein and cell lysates.

REACTIVITY

This antibody reacts with human CUL1. Reactivity with other species is possible based on sequence homology but has not been tested.

SAMPLE	ELISA	Immuno-precipitation* (native)	Western Blotting*
Human		+	+
Immunogen	+		

*Tested with lysates of IMR90 (human fibroblasts) and MG-63 (human osteosarcoma) cells

USAGE

Working concentrations for specific applications should be determined by the investigator. Optimal dilutions will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. We recommend the following ranges as starting points for this product.

ELISA: 0.1-1.0 µg/ml
Western Blotting: 1-3 µg/ml
Immunoprecipitation: 5-10 µg

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI718700

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BACKGROUND

In yeast, proteolysis of G1 cell cycle regulatory proteins is controlled by a ubiquitin ligase formed by three subunits: Cdc53 (also known as CulA), Skp1 and one of many F-box proteins (reviewed in ref 2). A *C. elegans* family of cullin genes homologous to the *S. cerevisiae cdc53* gene has been identified (*cul1*, 2, 3, 4, and 5)⁽²⁾. The *C. elegans cul1* null mutant shows a shortened G1 phase and a generalized hyperplasia, suggesting that Cul1 may be involved in the degradation of positive cell cycle regulators (e.g., G1 cyclins as in *S. cerevisiae*). These findings suggest that during evolution the *cdc53* gene diverged into at least five different genes, of which some may have specialized in the ubiquitination of specific proteins (e.g., cyclins) and others in the ubiquitination of other proteins (e.g., Cdk-inhibitors). A family of 6 human cullin genes (*cul1*, 2, 3, 4a, 4b, and 5) has also been identified⁽¹⁾. It was then shown that Cul1 forms a complex with human Skp1 and the F box protein Skp2. This complex is thought to play a role in the ubiquitination of G1 regulatory proteins as its homolog does in yeast.

REFERENCES

1. Kipreos, E.T., et al; *Cell* 85:829-839 (1996).
2. Pagano, M., *FASEB J.* 11:1067-1075 (1997).

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Goat anti-Rabbit IgG (H+L) (ZyMAX™ Grade)	Purified	81-6100
	FITC	81-6111
	TRITC	81-6114
	Cy™3	81-6115
	Cy™5	81-6116
	HRP	81-6120
	AP	81-6122
	Biotin	81-6140
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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