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Anti-RPC Antibody

Catalog # AP53712

Product Information

Application	WB, IHC, IF/IC
Primary Accession	O00442
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39337

Additional Information

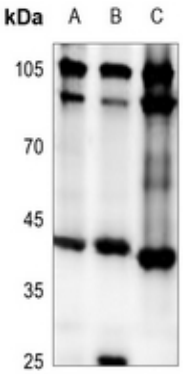
Gene ID	8634
Other Names	RPC; RPC1; RTC1; RTCD1; RNA 3'-terminal phosphate cyclase; RNA cyclase; RNA-3'-phosphate cyclase; RNA terminal phosphate cyclase domain-containing protein 1; RTC domain-containing protein 1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human RPC. The exact sequence is proprietary.
Dilution	WB~~1/500 - 1/1000 IHC~~1/50 - 1/200 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

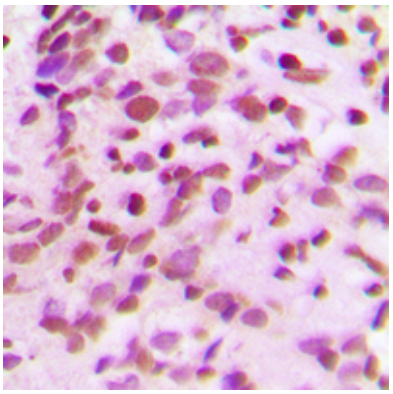
Name	RTCA
Synonyms	RPC, RPC1, RTC1, RTCD1
Function	Catalyzes the conversion of 3'-phosphate to a 2',3'-cyclic phosphodiester at the end of RNA (PubMed:9184239). The mechanism of action of the enzyme occurs in 3 steps: (A) adenylation of the enzyme by ATP; (B) transfer of adenylate to an RNA-N3'P to produce RNA- N3'PP5'A; (C) and attack of the adjacent 2'-hydroxyl on the 3'- phosphorus in the diester linkage to produce the cyclic end product (PubMed:9184239). Likely functions in some aspects of cellular RNA processing (PubMed:25961792, PubMed:9184239). Function plays an important role in regulating axon regeneration by inhibiting central nervous system (CNS) axon regeneration following optic nerve injury (PubMed:25961792).
Cellular Location	Nucleus, nucleoplasm

Tissue Location Ubiquitous.

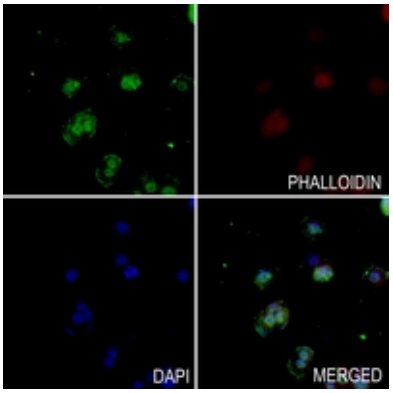
Images



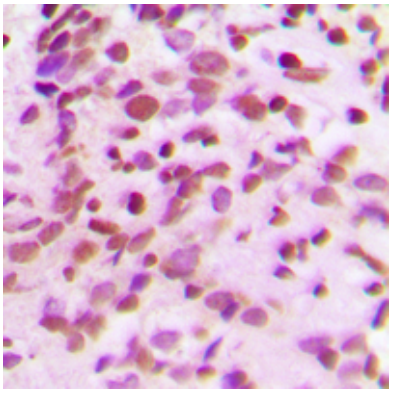
Western blot analysis of RPC expression in SGC7901 (A), Panc1 (B), C6 (C) whole cell lysates. (Predicted band size: 39 kD; Observed band size: 43 kD)



Immunohistochemical analysis of RPC staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of RPC staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).



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