

Datasheet for 100-401-395**Protective Protein/Cathepsin A Antibody****Overview**

Description:	Anti-Protective Protein/Cathepsin A (PPCA) (RABBIT) Antibody - 100-401-395
Item No.:	100-401-395
Size:	200 µL
Applications:	IHC, IP
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Lysosomal protective protein/cathepsin A (PPCA) is a lysosomal serine carboxypeptidase that forms an intralysosomal enzyme-complex with b-galactosidase and neuraminidase (NEU1). PPCA is synthesized as a 54-kDa precursor/zymogen, and proteolytically cleaved in the lysosome into a catalytically active 32- and 20-kDa two-chain enzyme. The enzyme has cathepsin A activity at acidic pH but maintains also a deamidase/esterase activity at neutral pH. Furthermore, the human enzyme, purified from platelets and lymphocytes, has been shown to function on the inactivation of selected neuropeptides, like substance P, oxytocin, and endothelin I. The autosomal recessive genetic deficiency of PPCA causes galactosialidosis, a neurodegenerative lysosomal storage disorder, resulting in the secondary deficiencies of b-galactosidase and NEU1.
Synonyms:	rabbit anti-Protective Protein Antibody, rabbit anti-Cathepsin A Antibody, Beta Galactosidase Protective Protein antibody, Carboxypeptidase C antibody, Cathepsin A antibody, CTSA antibody, Galactosialidosis antibody, GLB2 antibody, Goldberg Syndrome antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	CTSA, PPGB
Reactivity:	Human
Immunogen Type:	Recombinant Protein

Immunogen:	This whole rabbit serum was prepared by repeated immunizations with native 54-kDa human Protective Protein/Cathepsin A (PPCA) precursor, purified from the medium of baculovirus infected insect cells.
Purity/Specificity:	This antiserum is directed against PPCA and reacts with the PPCA from human tissues. Based on sequence we expect this antibody to react with PPCA from other sources, although specific reactivity has not been confirmed.
Relevant Links:	• UniProtKB - P10619 • NCBI - P10619.2 • GeneID - 5476

Application Details

Tested Applications:	IHC
Suggested Applications:	IP (Based on references)
Application Note:	Anti-PPCA has been tested by immunohistochemistry and is suitable for the detection of human PPCA (54-, 32-, and 20-kDa) on Western blot, by immunoprecipitation, immunocytochemistry, and ELISA of either transfected cells (e.g. COS-1 cells) or primary cells (e.g. fibroblasts).
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:1,000 - 1:5,000
IHC:	1:500
WB:	1:500 - 1:2,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	80 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.1% (w/v) Sodium Azide
Stabilizer:	None

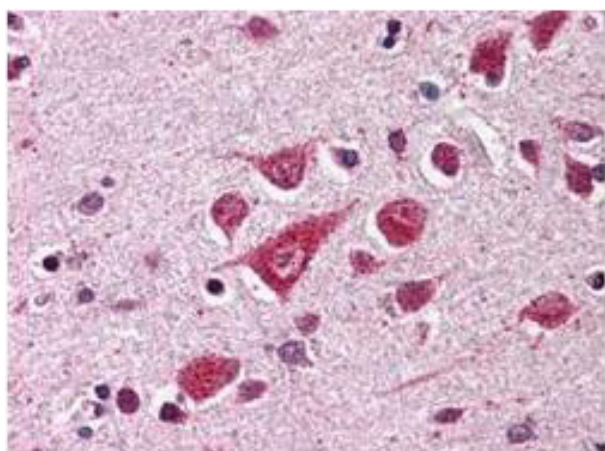
Shipping & Handling

Shipping Condition:	Dry Ice
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Storage Condition: 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.

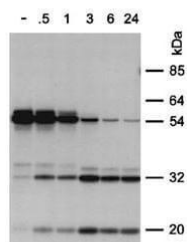
Expiration: Expiration date is one (1) year from date of receipt.

Images



Immunohistochemistry

Rockland's Anti-PPCA antibody was diluted 1:500 to detect PPCA in human brain cortex tissue. Tissue was formalin fixed and paraffin embedded. No pre-treatment of sample was required. The image shows the localization of antibody as the precipitated red signal, with a hematoxylin purple nuclear counter stain.



Immunoprecipitation

Pulse-chase labeling. COS-1 cells were transfected with cDNAs encoding neuraminidase and PPCA, labeled with [3H]leucine for 1 h and chased with cold leucine for the time periods indicated. Cell lysates and medium samples were immunoprecipitated with anti-PPCA antiserum. Exposure was for 20 days. This antibody immunoprecipitates 3 forms of PPCA: a 54 kDa precursor, and both the 32 kDa and 20 kDa mature subunits. Personal Communication, E. Bonten. See van der Spoel et al (1998) for additional details.

Disclaimer

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