

For Research Use Only

ATP5A1 Recombinant antibody, PBS Only

Catalog Number: 82288-1-PBS



Basic Information

Catalog Number: 82288-1-PBS	GenBank Accession Number: BC064562	Purification Method: Protein A purification
Size: 100ug, Concentration: 1mg/ml by Nanodrop;	GeneID (NCBI): 498	CloneNo.: 4O12
Source: Rabbit	UNIPROT ID: P25705	
Isotype: IgG	Full Name: ATP synthase, H ⁺ transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle	
Immunogen Catalog Number: AG6385	Calculated MW: 60 kDa	
	Observed MW: 50-55 kDa	

Applications

Tested Applications:
WB, IHC, IF/ICC, FC (Intra), Indirect ELISA

Species Specificity:
human, mouse, rat

Background Information

The ATP5A1 gene encodes the α subunit of mitochondrial ATP synthase which produces ATP from ADP in the presence of a proton gradient across the membrane. The mitochondrial ATP synthase, also known as Complex V or F1FO ATP synthase, is a multi-subunit enzyme complex consisting of two functional domains, the F1-containing the catalytic core and the Fo-containing the membrane proton channel. FO domain has 10 subunits: a, b, c, d, e, f, g, OSCP, A6L, and F6. F1 is composed of subunits α , β , γ , δ , ϵ , and a loosely attached inhibitor protein IF1. Recently defect in ATP5A1 has been linked to the fatal neonatal mitochondrial encephalopathy. ATP5A1 is localized in the mitochondria and anti-ATP5A1 can be used as the loading control for mitochondrial or Complex V proteins. This antibody recognizes the endogenous ATP5A1 protein in lysates from various cell lines and tissues. The predicted MW of ATP5A1 is 60 kDa, while it undergoes the transit peptide cleavage to become a mature form around 50-55 kDa. Several isoforms of ATP5A1 exist due to the alternative splicing.

Storage

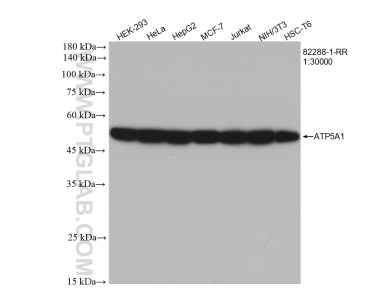
Storage:
Store at -80°C.

Storage Buffer:
PBS Only

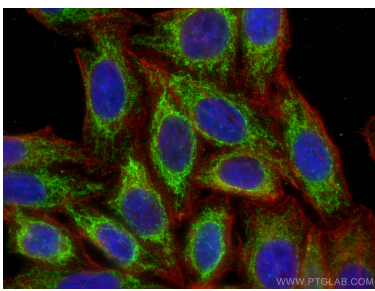
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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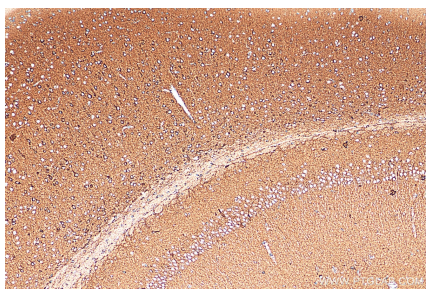
Selected Validation Data



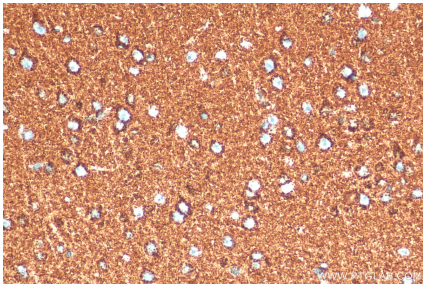
Various lysates were subjected to SDS PAGE followed by western blot with 82288-1-RR (ATP5A1 antibody) at dilution of 1:30000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 82288-1-PBS in a different storage buffer formulation.



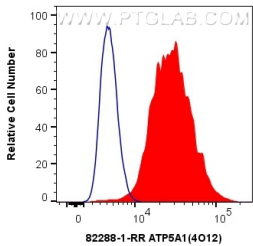
Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using ATP5A1 antibody (82288-1-RR, Clone: 4O12) at dilution of 1:2000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red). This data was developed using the same antibody clone with 82288-1-PBS in a different storage buffer formulation.



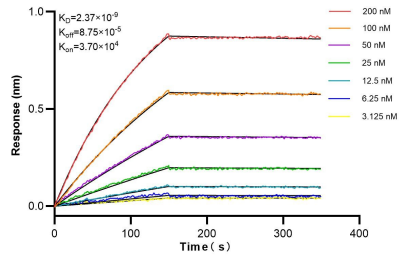
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 82288-1-RR (ATP5A1 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 82288-1-PBS in a different storage buffer formulation.



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 82288-1-RR (ATP5A1 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 82288-1-PBS in a different storage buffer formulation.



1X10⁶ HeLa cells were intracellularly stained with 0.4 ug Anti-Human ATP5A1 (82288-1-RR, Clone:4O12) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C). This data was developed using the same antibody clone with 82288-1-PBS in a different storage buffer formulation.



Bi-layer interferometry (BLI) kinetic assays of 82288-1-RR against Human ATP5A1 were performed. The affinity constant is 2.37 nM.