

For Research Use Only

UMP/CMP kinase Recombinant monoclonal antibody, PBS Only (Detector)

Catalog Number: 86475-1-PBS



Basic Information

Catalog Number: 86475-1-PBS	GenBank Accession Number: BC014961	Purification Method: Protein A purification
Source: Rabbit	GeneID (NCBI): 51727	CloneNo.: 251233D3
Isotype: IgG	UNIPROT ID: P30085	
Immunogen Catalog Number: AG1920	Full Name: cytidine monophosphate (UMP-CMP) kinase 1, cytosolic	
	Calculated MW: 228 aa, 26 kDa	
	Observed MW: 22 kDa	

Applications

Tested Applications:
WB, IHC, IF/ICC, Cytometric bead array, Sandwich ELISA, Indirect ELISA

Species Specificity:
human

Background Information

Pyrimidine nucleoside monophosphate kinase [UMP/CMP Kinase (UMP/CMK)] (CMPK1) is also named as CMK, CMPK, UCK, UMK, UMPK and belongs to the adenylate kinase family. It plays a crucial role in the formation of UDP, CDP, and dCDP, which are required for cellular nucleic acid synthesis (PMID:11912132). CMPK1 can use a broad spectrum of phosphate donors but the best phosphate donors are ATP and dATP. CMPK1 has been reported as a prognostic marker for non-small cell lung cancer, pancreatic cancer and breast cancer (PMID: 21642870, 22838950, 27558661). The longest deduced protein contains 228 amino acids and has a calculated molecular mass of 26 kDa. However, translation likely begins at the second initiation methionine, resulting in a protein of 196 amino acids (PMID:10462544). The shorter form is the endogenously translated protein (PMID:11912132). CMPK1 has 3 isoforms with the molecular mass of 22, 16 and 26 kDa.

Storage

Storage:
Store at -80°C.
The product is shipped with ice packs. Upon receipt, store it immediately at -80°C

Storage Buffer:
PBS only, pH7.3

For technical support and original validation data for this product please contact:

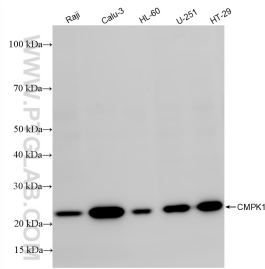
T: 4006900926

E: Proteintech-CN@ptglab.com

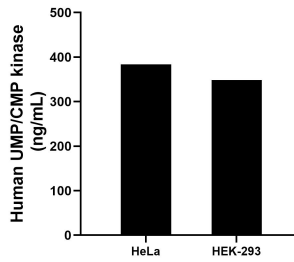
W: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

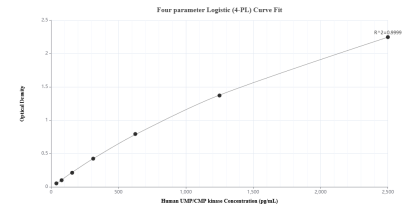
Selected Validation Data



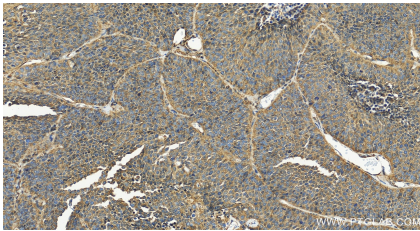
Various lysates were subjected to SDS PAGE followed by western blot with 86475-1-RR (CMFK1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 86475-1-PBS in a different storage buffer formulation.



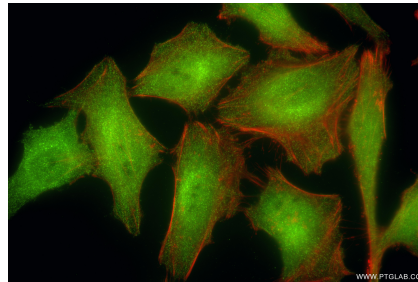
The mean UMP/CMP kinase concentration was determined to be 383.79 ng/mL in HeLa cell extract based on a 1.2 mg/mL extract load and 348.74 ng/mL in HEK-293 cell extract based on a 1.2 mg/mL extract load.



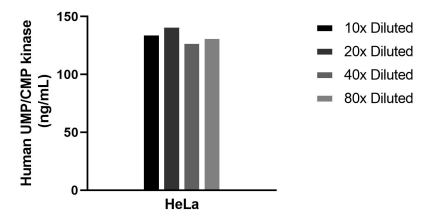
Sandwich ELISA standard curve of MP02460-1, Human UMP/CMP kinase Recombinant Matched Antibody Pair - PBS only. 86475-2-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Ag1920. 86475-1-PBS was HRP conjugated as the detection antibody. Range: 39.1-2500 pg/mL



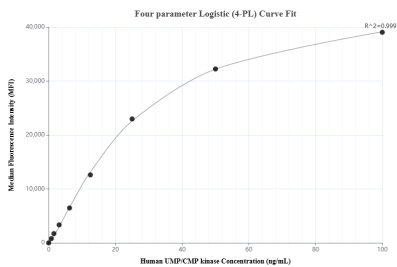
Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 86475-1-RR (CMFK1 antibody) at dilution of 1:400 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 86475-1-PBS in a different storage buffer formulation.



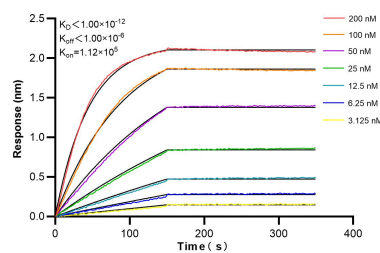
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using CMFK1 antibody (86475-1-RR, Clone: 251233D3) at dilution of 1:200 and CoralLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red). This data was developed using the same antibody clone with 86475-1-PBS in a different storage buffer formulation.



The mean UMP/CMP kinase concentration was determined to be 134.2 ng/mL in HeLa cell extract based on a 1.2 mg/mL extract load.



Cytometric bead array standard curve of MP02460-1, UMP/CMP kinase Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 86475-2-PBS. Detection antibody: 86475-1-PBS. Standard: Ag1920. Range: 0.781-100 ng/mL



Biolayer interferometry (BLI) kinetic assays of 86475-1-RR against Human UMP/CMP kinase were performed. The affinity constant is below 1 pM.