

For Research Use Only

PDK4 Recombinant antibody, PBS Only (Detector)

Catalog Number: 83583-1-PBS



Basic Information

Catalog Number: 83583-1-PBS	GenBank Accession Number: BC040239	Purification Method: Protein A purification
Size: 100ug, Concentration: 1 mg/ml by Nanodrop;	GeneID (NCBI): 5166	CloneNo.: 240551E4
Source: Rabbit	UNIPROT ID: Q16654	
Isotype: IgG	Full Name: pyruvate dehydrogenase kinase, isozyme 4	
Immunogen Catalog Number: AG3629	Calculated MW: 411 aa, 46 kDa	
	Observed MW: 46 kDa	

Applications

Tested Applications:
WB, IHC, FC (Intra), Cytometric bead array, Sandwich ELISA, Indirect ELISA, Sample test

Species Specificity:
human, mouse

Product Information

83583-1-PBS targets PDK4 as part of a matched antibody pair.

MP00556-2: 83583-2-PBS capture and 83583-1-PBS detection (validated in Cytometric bead array)

MP00556-3: 83583-3-PBS capture and 83583-1-PBS detection (validated in Sandwich ELISA)

Unconjugated rabbit recombinant monoclonal antibody in PBS only (BSA and azide free) storage buffer at a concentration of 1 mg/mL, ready for conjugation. Created using Proteintech's proprietary in-house recombinant technology. Recombinant production enables unrivalled batch-to-batch consistency, easy scale-up, and future security of supply.

This conjugation ready format makes antibodies ideal for use in many applications including: ELISAs, multiplex assays requiring matched pairs, mass cytometry, and multiplex imaging applications. Antibody use should be optimized by the end user for each application and assay.

Background Information

Pyruvate dehydrogenase kinase isoform4 (PDK4) is also named as PDHK4 and belongs to the PDK/BCKDK protein kinase family. It is upregulated by starvation in many tissues of the body during starvation. This causes inactivation of the pyruvate dehydrogenase complex which blocks pyruvate oxidation and conserves lactate and alanine for gluconeogenesis. Enhanced PDK4 expression may be caused by the increase in free fatty acids that occurs during starvation. Free fatty acids can activate peroxisome proliferator-activated receptor α (PPAR α), and activation of PPAR α can promote PDK4 expression (PMID: 11554740).

Storage

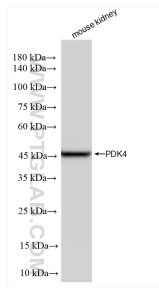
Storage:
Store at -80°C.

Storage Buffer:
PBS Only

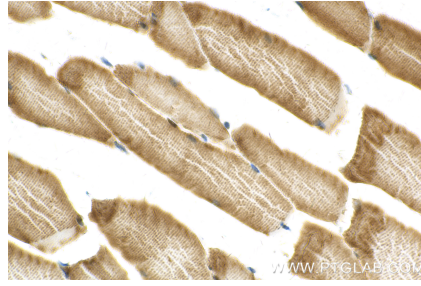
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA) E: proteintech@ptglab.com
W: ptglab.com

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

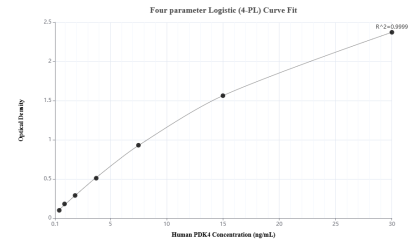
Selected Validation Data



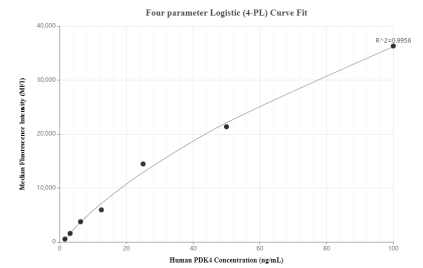
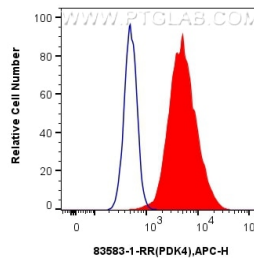
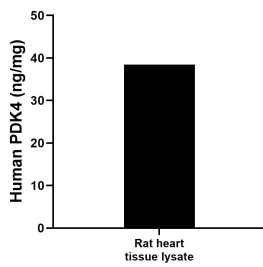
mouse kidney tissue was subjected to SDS PAGE followed by western blot with 83583-1-RR (PDK4 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 83583-1-PBS in a different storage buffer formulation.



Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue slide using 83583-1-RR (PDK4 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 83583-1-PBS in a different storage buffer formulation.



Sandwich ELISA standard curve of MP00556-3, Human PDK4 Recombinant Matched Antibody Pair - PBS only. 83583-3-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Ag3629. 83583-1-PBS was HRP conjugated as the detection antibody. Range: 0.47-30 ng/mL

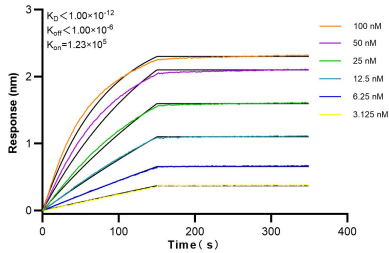


Dissect the rat heart tissue and wash briefly with chilled 1X PBS to remove any blood if necessary, cut the tissue into smaller pieces whilst keeping it on ice. Transfer the tissue to a homogenizer and add Extraction Reagent with protease inhibitor. In general, add 500 μ L Extraction Reagent for approximately every 10 mg of tissue. Homogenize thoroughly and keep the sample on ice for 30 min. Sonicate the sample and centrifuge at 10,000 \times g, then



1×10^6 HeLa cells were intracellularly stained with 0.25 μ g PDK4 Recombinant antibody (83583-1-RR, Clone:240551E4) and APC-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L)(red), or 0.25 μ g Isotype Control (blue). 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 83583-1-PBS in a different storage buffer formulation.

Cytometric bead array standard curve of MP00556-2, PDK4 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 83583-2-PBS. Detection antibody: 83583-1-PBS. Standard: Ag3629. Range: 1.56-100 ng/mL.



Bi-layer interferometry (BLI) kinetic assays of 83583-1-RR against Human PDK4 were performed. The affinity constant is below 1 pM.