

For Research Use Only

# CAMK2B Recombinant monoclonal antibody, PBS Only (Detector)

Catalog Number: 86858-1-PBS



## Basic Information

<b>Catalog Number:</b> 86858-1-PBS	<b>GenBank Accession Number:</b> BC019070	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug , Concentration: 1 mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 816	<b>CloneNo.:</b> 251925D4
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> Q13554	
<b>Isotype:</b> IgG	<b>Full Name:</b> calcium/calmodulin-dependent protein kinase II beta	
<b>Immunogen Catalog Number:</b> AG2119	<b>Calculated MW:</b> 503 aa, 56 kDa	
	<b>Observed MW:</b> 50-70 kDa	

## Applications

**Tested Applications:**  
WB, Sandwich ELISA, Indirect ELISA

**Species Specificity:**  
human, mouse, rat

## Product Information

86858-1-PBS targets CAMK2B as part of a matched antibody pair:

MP02919-1: 86858-2-PBS capture and 86858-1-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

CAMK2B (Calcium/calmodulin-dependent protein kinase type II subunit beta), also named CAM2, CAMK2, and CAMKB, belongs to the protein kinase superfamily, CAMK Ser/Thr protein kinase family, and CaMK subfamily. It is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. CAMK2B is a member of the NMDAR signaling complex in excitatory synapses, it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity. It plays a distinct role in the induction of energy in T lymphocytes, by differential regulation of IL10 and IL2 gene transcription suggesting MEF2A as a molecular target that can integrate different calcium signals (PMID:22578382). This protein has 8 isoforms produced by alternative splicing with a molecular weight between 50 kDa and 73 kDa. This antibody may have cross-reaction with CAMK2A/D/G due to the high homology.

## Storage

**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS only, pH7.3

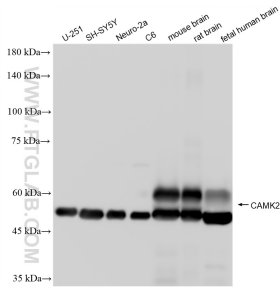
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

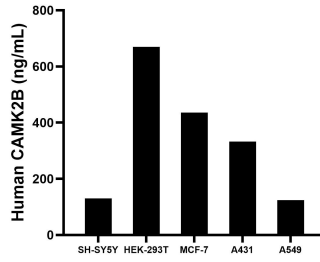
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

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

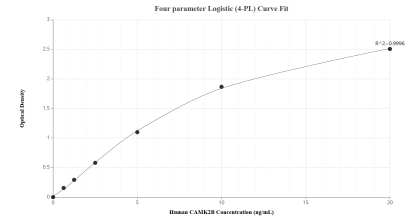
## Selected Validation Data



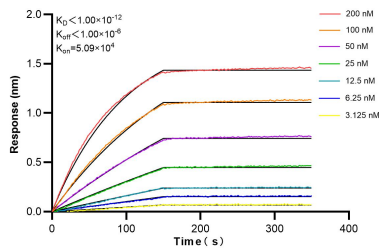
Various lysates were subjected to SDS PAGE followed by western blot with 86858-1-RR (CAMK2B antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 86858-1-PBS in a different storage buffer formulation.



The mean CAMK2B concentration was determined to be 130.09 ng/mL in SH-SY5Y cell extract based on a 1.20 mg/mL extract load, 669.36 ng/mL in HEK-293T cell extract based on a 1.20 mg/mL extract load, 436.22 ng/mL in MCF-7 cell extract based on a 1.20 mg/mL extract load, 332.36 ng/mL in A431 cell extract based on a 1.20 mg/mL extract load and 124.24 ng/mL in A549 cell extract based on a 1.20 mg/mL extract load.



Sandwich ELISA standard curve of MP02919-1, Human CAMK2B Recombinant Matched Antibody Pair - PBS only. 86858-2-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Ag2119. 86858-1-PBS was HRP conjugated as the detection antibody. Range: 0.625-20 ng/mL



Biolayer interferometry (BLI) kinetic assays of 86858-1-RR against Human CAMK2B were performed. The affinity constant is below 1 pM.