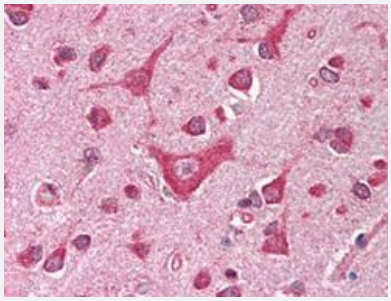
CAMK4 polyclonal antibody

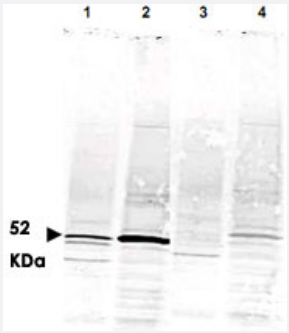
Catalog # PAB9938 Size 100 uL

Applications



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemical staining with CAMK4 polyclonal antibody (Cat # PAB9938) was diluted 1 : 500 to detect CAMK4 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.



Western Blot

Western blot using CAMK4 polyclonal antibody (Cat # PAB9938) shows detection of a band ~52 KDa corresponding to CAMK4 (arrowhead) in various preparations.
Staining ofrat brain lysate is shown in lane 1.
Jurkat cell lysate staining is shown in lane 2.
Specific reactivity is blocked in both lysates when antibodyis preincubated with immunizing peptide (lanes 3 and 4 respectively).
Approximately 35 ug of each lysate was separated by 4-20% SDS-PAGE and transferred onto nitrocellulose.
CAMK4 was similarly detected on lysates from mouse brain (not shown).
After blocking the membrane was probed with the primary antibody diluted to 1 : 1,000 for 2h at room temperature followed by washes and reaction with a 1 : 10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L]MX for 45 min at room temperature.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of CAMK4.

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Immunogen	A synthetic peptide corresponding to amino acids 305-323 of human CAMK4.
Host	Rabbit
Reactivity	Bovine, Chicken, Chimpanzee, Dog, Frog, Human, Mouse, Rat
Form	Lyophilized
Quality Control Testing	Antibody Reactive Against Synthetic Peptide.
Recommend Usage	ELISA (1:5000-1:25000) Western Blot (1:500-1:2000) The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from 20 mM KH_2PO_4, 150 mM NaCl, pH 7.2 (0.01% sodium azide)
Storage Instruction	Store at 4°C on dry atmosphere. After reconstitution with 0.1 mL of deionized water, store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

  Immunohistochemical staining with CAMK4 polyclonal antibody (Cat # PAB9938) was diluted 1 : 500 to detect CAMK4 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.

- Enzyme-linked Immunoabsorbent Assay

- Western Blot

  Western blot using CAMK4 polyclonal antibody (Cat # PAB9938) shows detection of a band ~52 KDa corresponding to CAMK4 (arrowhead) in various preparations.
  Staining ofrat brain lysate is shown in lane 1.
  Jurkat cell lysate staining is shown in lane 2.
  Specific reactivity is blocked in both lysates when antibodyis preincubated with immunizing peptide (lanes 3 and 4 respectively).
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  CAMK4 was similarly detected on lysates from mouse brain (not shown).
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Gene Info — CAMK4

Entrez GeneID	814
Protein Accession#	Q16566(Human);P08414(Mouse);P13234(Rat)
Gene Name	CAMK4
Gene Alias	CaMK-GR, MGC36771
Gene Description	calcium/calmodulin-dependent protein kinase IV
Omim ID	114080
Gene Ontology	Hyperlink
Gene Summary	The product of this gene belongs to the serine/threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. This enzyme is a multifunctional serine/threonine protein kinase with limited tissue distribution, that has been implicated in transcriptional regulation in lymphocytes, neurons and male germ cells. [provided by RefSeq
Other Designations	CAM kinase IV|CAM kinase- GR|brain Ca(2+)-calmodulin-dependent protein kinase type IV|brain Ca++-calmodulin-dependent protein kinase type IV|calcium/calmodulin-dependent protein kinase type IV catalytic chain

Publication Reference

- The cDNA sequence and characterization of the Ca2+/calmodulin-dependent protein kinase-Gr from human brain and thymus.

  Bland MM, Monroe RS, Ohmstede CA.

  Gene 1994 May; 142(2):191.

  Application: IP, RIA, WB-Ce, WB-Ti, Human, Mouse, Rat, G1-TC, Jurkat, Mouse cerebellum, Rat cerebellum, SK-N-SH cells

- cDNA cloning and expression of human calmodulin-dependent protein kinase IV.

  Kitani T, Okuno S, Fujisawa H.

  Journal of Biochemistry 1994 Apr; 115(4):637.

  Application: WB-Re, WB-Tr, Human, Rat, Jurkat cells, Rat brains, Recombinant proteins

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- A Ca2+/calmodulin-dependent protein kinase, CaM kinase-Gr, expressed after transformation of primary human B lymphocytes by Epstein-Barr virus (EBV) is induced by the EBV oncogene LMP1.

  Mosialos G, Hanissian SH, Jawahar S, Vara L, Kieff E, Chatila TA.

  Journal of Virology 1994 Mar; 68(3):1697.

  Application: WB, Human, BJAB, Jurkat cells

Pathway

- Calcium signaling pathway
- Long-term potentiation
- Neurotrophin signaling pathway

Disease

- Alcoholism
- Azoospermia
- Genetic Predisposition to Disease
- Narcolepsy
- Oligospermia
- Tobacco Use Disorder

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