10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

CAMK4 Antibody (Center H353) Blocking Peptide

Synthetic peptide
Catalog # BP7211c

Specification

CAMK4 Antibody (Center H353) Blocking Peptide - Product Information

Primary Accession Q16566

CAMK4 Antibody (Center H353) Blocking Peptide - Additional Information

Gene ID 814

Other Names
Calcium/calmodulin-dependent protein kinase type IV, CaMK IV, CaM kinase-GR, CAMK4, CAMK, CAMK-GR, CAMKIV

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7211c was selected from the Center region of human CAMK4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CAMK4 Antibody (Center H353) Blocking Peptide - Protein Information

Name CAMK4

CAMK4 Antibody (Center H353) Blocking Peptide - Background

CAMK4 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.

CAMK4 Antibody (Center H353) Blocking Peptide - References

Takai, N., et al., Cancer Lett. 183(2):185-193 (2002).Kang, H., et al., Cell 106(6):771-783 (2001).Wu, J.Y., et al., Nat. Genet. 25(4):448-452 (2000).Mosialos, G., et al., J. Virol. 68(3):1697-1705 (1994).Kitani, T., et al., J. Biochem. 115(4):637-640 (1994).

Synonyms CAMK, CAMK-GR, CAMKIV

Function
Calcium/calmodulin-dependent protein kinase that operates in the calcium-triggered CaMKK-CaMK4 signaling cascade and regulates, mainly by phosphorylation, the activity of several transcription activators, such as CREB1, MEF2D, JUN and RORA, which play pivotal roles in immune response, inflammation, and memory consolidation. In the thymus, regulates the CD4(+)/CD8(+) double positive thymocytes selection threshold during T-cell ontogeny. In CD4 memory T-cells, is required to link T-cell antigen receptor (TCR) signaling to the production of IL2, IFNG and IL4 (through the regulation of CREB and MEF2). Regulates the differentiation and survival phases of osteoclasts and dendritic cells (DCs). Mediates DCs survival by linking TLR4 and the regulation of temporal expression of BCL2. Phosphorylates the transcription activator CREB1 on 'Ser-133' in hippocampal neuron nuclei and contribute to memory consolidation and long term potentiation (LTP) in the hippocampus. Can activate the MAP kinases MAPK1/ERK2, MAPK8/JNK1 and MAPK14/p38 and stimulate transcription through the phosphorylation of ELK1 and ATF2. Can also phosphorylate in vitro CREBBP, PRM2, MEF2A and STMN1/OP18.

Cellular Location
Cytoplasm. Nucleus. Note=Localized in hippocampal neuron nuclei. In spermatids, associated with chromatin and nuclear matrix (By similarity).

Tissue Location
Expressed in brain, thymus, CD4 T-cells, testis and epithelial ovarian cancer tissue.

CAMK4 Antibody (Center H353) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides