**BACKGROUND**

The Ca²⁺/calmodulin-dependent protein kinases (CaM kinases) comprise a structurally related subfamily of serine/threonine kinases which include CaMKI, CaMKII and CaMKIV. CaMKII is ubiquitously expressed serine/threonine protein kinase that is activated by Ca²⁺ and calmodulin (CaM) and has been implicated in regulation of the cell cycle and transcription. There are four CaMKII isozymes designated α, β, γ and δ which may or may not be co-expressed in the same tissue types. CaMKIV is stimulated by Ca²⁺ and CaM but also requires phosphorylation on threonine 196 by a CaMK for full activation. Stimulation of the T cell receptor CD3 signaling complex with an anti-CD3 monoclonal antibody leads to a 10-40 fold increase in CaMKIV activity. An additional kinase, CaM4K, functions to activate CaMKI through the specific phosphorylation of the regulatory threonine residue at position 177.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: CAMK4 (human) mapping to 5q22.1; Camk4 (mouse) mapping to 18 B1.

**SOURCE**

p-CaMKIV (Thr196)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr196 phosphorylated CaMKIV of mouse origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-28443 P,(100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**APPLICATIONS**

p-CaMKIV (Thr 196)-R is recommended for detection of Thr 196 phosphorylated CaMK IV of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-CaMKIV (Thr196)-R is also recommended for detection of correspondingly phosphorylated CaMK IV in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CaMK IV siRNA (h): sc-29902, CaMK IV siRNA (m): sc-29903, CaMK IV shRNA Plasmid (h): sc-29902-SH, CaMK IV shRNA Plasmid (m): sc-29903-SH, CaMK IV shRNA (h) Lentiviral Particles: sc-29902-V and CaMK IV shRNA (m) Lentiviral Particles: sc-29903-V.

Molecular Weight of p-CaMKIV: 60 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our website at www.scbt.com or our catalog for detailed protocols and support products.