

CaMKII γ (8G10C1): sc-517278

BACKGROUND

Ca²⁺/calmodulin-dependent protein kinase II (CaMKII) is a Ca²⁺-signaling intermediate that contains α , β , γ and δ subunits. Calcium oscillations, autophosphorylation and subunit composition of CaMKII influences the level of regulation of cellular events, including cell cycle and transcription. Several CaMKII γ protein isoforms are present in biliary epithelium.

CHROMOSOMAL LOCATION

Genetic locus: CAMK2G (human) mapping to 10q22.2; Camk2g (mouse) mapping to 14 A3.

SOURCE

CaMKII γ (8G10C1) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 322-481 of CaMKII γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CaMKII γ (8G10C1) is available conjugated to agarose (sc-517278 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-517278 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-517278 PE), fluorescein (sc-517278 FITC), Alexa Fluor[®] 488 (sc-517278 AF488), Alexa Fluor[®] 546 (sc-517278 AF546), Alexa Fluor[®] 594 (sc-517278 AF594) or Alexa Fluor[®] 647 (sc-517278 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-517278 AF680) or Alexa Fluor[®] 790 (sc-517278 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

CaMKII γ (8G10C1) is recommended for detection of CaMKII γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CaMKII γ siRNA (h): sc-29898, CaMKII γ siRNA (m): sc-29899, CaMKII γ siRNA (r): sc-270386, CaMKII γ shRNA Plasmid (h): sc-29898-SH, CaMKII γ shRNA Plasmid (m): sc-29899-SH, CaMKII γ shRNA Plasmid (r): sc-270386-SH, CaMKII γ shRNA (h) Lentiviral Particles: sc-29898-V, CaMKII γ shRNA (m) Lentiviral Particles: sc-29899-V and CaMKII γ shRNA (r) Lentiviral Particles: sc-270386-V.

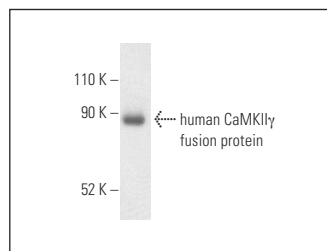
Molecular Weight of CaMKII γ : 55-62 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, Jurkat whole cell lysate: sc-2204 or C2C12 whole cell lysate: sc-364188.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CaMKII γ (8G10C1): sc-517278. Western blot analysis of human recombinant CaMKII γ fusion protein.

SELECT PRODUCT CITATIONS

- Nicole, O., et al. 2018. A novel role for CAMKII β in the regulation of cortical neuron migration: implications for neurodevelopmental disorders. *Mol. Psychiatry* 23: 2209-2226.
- Yang, L., et al. 2020. CAMKII γ is a targetable driver of multiple myeloma through CaMKII γ /Stat3 axis. *Aging* 12: 13668-13683.
- Huang, R., et al. 2020. MicroRNA-219a-5p-mediated inhibition of CaMKII γ facilitates vestibular compensation in acute vertigo by promoting protein kinase C expression. *Ann. N.Y. Acad. Sci.* 1475: 78-88.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA