SANTA CRUZ BIOTECHNOLOGY, INC.

CaMKIIγ (8G10C1): sc-517238

BACKGROUND

Ca^{2+}/calmodulin-dependent protein kinase II (CaMKII) is a Ca^{2+}-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 CaMKIIγ protein isoforms are present in biliary epithelium.

REFERENCES

1. Nghiem, P., et al. 1993. Cloning and analysis of two new isoforms of multifunctional Ca^{2+}/calmodulin-dependent protein kinase. Expression in multiple human tissues. J. Biol. Chem. 268: 5471-5479.
2. Kwiatkowski, A.P., et al. 2000. Alternative splice variant of γ calmodulin-dependent protein kinase II alters activation by calmodulin. Arch. Biochem. Biophys. 378: 377-383.
3. Bui, J.D., et al. 2000. A role for CaMKII in T cell memory. Cell 100: 457-467.
4. Lorenz, J.M., et al. 2002. Differential autophosphorylation of CaMKII from phasic and tonic smooth muscle tissues. Am. J. Physiol., Cell. Physiol. 283: 1399-1413.
5. Gloyn, A.L., et al. 2002. Human calcium/calmodulin-dependent protein kinase II γ gene (CAMK2G): cloning, genomic structure and detection of variants in subjects with type II diabetes. Diabetologia 45: 580-583.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CaMKIIγ (8G10C1) is recommended for detection of CaMKIIγ of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

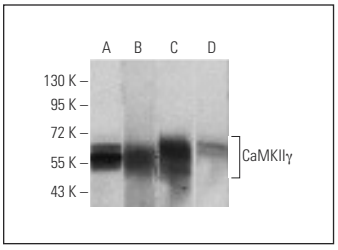
Suitable for use as control antibody for CaMKIIγ siRNA (h): sc-29898, CaMKIIγ shRNA Plasmid (h): sc-29898-SH and CaMKIIγ shRNA (h) Lentiviral Particles: sc-29898-V.

Positive Controls: PC-12 cell lysate: sc-2250, Jurkat whole cell lysate: sc-2204 or Hep G2 cell lysate: sc-2227.

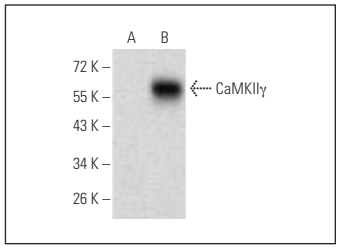
STORAGE

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

DATA



CaMKIIγ (8G10C1): sc-517238. Western blot analysis of CaMKIIγ expression in PC-12 (**A**), Jurkat (**B**), T-47D (**C**) and Hep G2 (**D**) whole cell lysates.



CaMKIIγ (8G10C1): sc-517238. Western blot analysis of CaMKIIγ expression in non-transfected (**A**) and human CaMKIIγ (322-481)-hIgGFc transfected (**B**) HEK293 whole cell lysates.

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.

CONJUGATES

See **CaMKII (G-1): sc-5306** for CaMKII antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.