

casein kinase I γ 1 (A-6): sc-133206

BACKGROUND

Casein kinase I (also designated CKI) and casein kinase II (CKII) compose a family of serine/threonine protein kinases which are present in all eukaryotes examined to date. Casein kinase I family members, which include casein kinase I α , I γ , I δ and I ϵ , have been implicated in the control of cytoplasmic and nuclear processes, including DNA replication and repair. CKII is usually expressed as a tetrameric complex consisting of either an α 2 β 2 or an α ' α ' β 2 structure. The α catalytic subunit is stimulated by the β regulatory subunit, which undergoes autophosphorylation. Casein kinase II activity is high in the cytosol and nucleus of proliferating and differentiating cells. Casein kinase II is known to phosphorylate more than 100 different substrates including nuclear oncoproteins, transcription factors and enzymes involved in DNA metabolism.

REFERENCES

- Lozeman, F.J., et al. 1990. Isolation and characterization of human cDNA clones encoding the α and the α' subunits of casein kinase II. *Biochemistry* 29: 8436-8447.
- Tuazon, P.T. and Traugh, J.A. 1991. Casein kinase I and II—multipotential serine protein kinases: structure, function and regulation. *Adv. Second Messenger Phosphoprotein Res.* 23: 123-164.
- Graves, P.R., et al. 1993. Molecular cloning, expression and characterization of a 49 kDa casein kinase I isoform from rat testis. *J. Biol. Chem.* 268: 6394-6401.
- Litchfield, D.W. and Luscher, B. 1993. Casein kinase II in signal transduction and cell cycle regulation. *Mol. Cell. Biochem.* 127-128: 187-199.
- Zhai, L., et al. 1995. Casein kinase I γ subfamily. Molecular cloning, expression, and characterization of three mammalian isoforms and complementation of defects in the *Saccharomyces cerevisiae* YCK genes. *J. Biol. Chem.* 270: 12717-12724.

SOURCE

casein kinase I γ 1 (A-6) is a mouse monoclonal antibody raised against amino acids 1-70 mapping at the N-terminus of casein kinase I γ 1 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

casein kinase I γ 1 (A-6) is available conjugated to agarose (sc-133206 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133206 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133206 PE), fluorescein (sc-133206 FITC), Alexa Fluor[®] 488 (sc-133206 AF488), Alexa Fluor[®] 546 (sc-133206 AF546), Alexa Fluor[®] 594 (sc-133206 AF594) or Alexa Fluor[®] 647 (sc-133206 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-133206 AF680) or Alexa Fluor[®] 790 (sc-133206 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

casein kinase I γ 1 (A-6) is recommended for detection of casein kinase I γ 1, casein kinase I γ 2 and casein kinase I γ 3 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

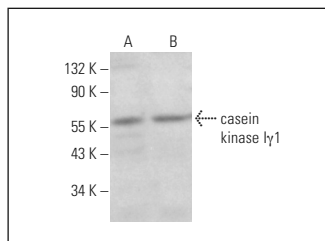
Molecular Weight of casein kinase I γ 1: 43 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, casein kinase I γ 1 (m): 293T Lysate: sc-119014 or PC-12 cell lysate: sc-2250.

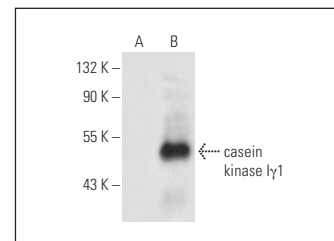
RECOMMENDED SUPPORT REAGENTS

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.

DATA



casein kinase I γ 1 (A-6): sc-133206. Western blot analysis of casein kinase I γ 1 expression in PC-12 (A) and NIH/3T3 (B) whole cell lysates.



casein kinase I γ 1 (A-6): sc-133206. Western blot analysis of casein kinase I γ 1 expression in non-transfected: sc-117752 (A) and mouse casein kinase I γ 1 transfected: sc-119014 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Cui, Y., et al. 2017. In-depth proteomic analysis of the hippocampus in a rat model after cerebral ischaemic injury and repair by Danhong injection (DHI). *Int. J. Mol. Sci.* 18: 1355.

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.

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