# casein kinase Iγ2 (h2): 293T Lysate: sc-172788



The Power to Question

#### **BACKGROUND**

Casein kinase I (also designated CKI) and casein kinase II (also designated CKII) compose a family of serine/threonine protein kinases which are present in all eukaryotes examined to date. CKI family members, which include CKI $\alpha$ ,  $\gamma$ ,  $\epsilon$  and  $\delta$ , 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  $\alpha 2\beta 2$  or an  $\alpha\alpha'\beta 2$  structure. The  $\alpha$  catalytic subunit is stimulated by the  $\beta$  regulatory subunit, which undergoes autophosphorylation. CKII activity is high in the cytosol and nucleus of proliferating and differentiating cells. CKII is known to phosphorylate more than 100 different substrates including nuclear oncoproteins, transcription factors and enzymes involved in DNA metabolism.

## **REFERENCES**

- 1. Lozeman, F.J., et al. 1990. Isolation and characterization of human cDNA clones encoding the  $\alpha$  and the  $\alpha'$  subunits of casein kinase II. Biochemistry 29: 8436-8447.
- Tuazon, P.T., et al. 1991. Casein kinase I and II—multipotential serine protein kinases: structure, function, and regulation. Adv. Second Messenger Phosphoprotein Res. 23: 123-164.
- 3. Litchfield, D.W., et al. 1993. Casein kinase II in signal transduction and cell cycle regulation. Mol. Cell. Biochem. 127-128: 187-199.
- Graves, P.R., et al. 1993. Molecular cloning, expresion, and characterization of a 49 kDa casein kinase I isoform from rat testis. J. Biol. Chem. 268: 6394-6401.
- 5. Zhai, L., et al. 1995. Casein kinase I  $\gamma$  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.
- 6. Fish, K.J., et al. 1995. Isolation and characterization of human casein kinase le (CKI), a novel member of the CKI gene family. J. Biol. Chem. 270: 14875-14883.
- Allende, J.E. and Allende, C.C. 1995. Protein kinases. 4. Protein kinase CK2: an enzyme with multiple substrates and a puzzling regulation. FASEB J. 9: 313-323.

# **CHROMOSOMAL LOCATION**

Genetic locus: CSNK1G2 (human) mapping to 19p13.3.

#### **PRODUCT**

casein kinase ly2 (h2): 293T Lysate represents a lysate of human casein kinase ly2 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

# **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **APPLICATIONS**

casein kinase  $I\gamma2$  (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive casein kinase  $I\gamma2$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## **RESEARCH USE**

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

#### **PROTOCOLS**

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com