

# casein kinase I $\alpha$ (N-19): sc-6478

## 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, membrane trafficking, circadian rhythm, cell cycle progression, chromosome segregation, apoptosis and cellular differentiation. CKI isoform  $\alpha$ -like (CSNK1A1L) is a 337 amino acid protein that shares a high degree of sequence similarity with the alpha isoform of casein kinase 1. CSNK1A1L resides in the cytoplasm and participates in the Wnt signaling pathway. By utilizing ATP within its protein kinase domain, CSNK1A1L phosphorylates a large number of proteins.

## CHROMOSOMAL LOCATION

Genetic locus: CSNK1A1 (human) mapping to 5q32, CSNK1A1 (human) mapping to 13q13.3; Csnk1a1 (mouse) mapping to 18 D3.

## SOURCE

casein kinase I $\alpha$  (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of casein kinase I $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6478 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

casein kinase I $\alpha$  (N-19) is recommended for detection of casein kinase I $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); also recommended for detection of CSNK1A1L of human origin.

casein kinase I $\alpha$  (N-19) is also recommended for detection of casein kinase I $\alpha$  in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for casein kinase I $\alpha$  siRNA (h): sc-29912, casein kinase I $\alpha$  siRNA (m): sc-29913, casein kinase I $\alpha$  shRNA Plasmid (h): sc-29912-SH, casein kinase I $\alpha$  shRNA Plasmid (m): sc-29913-SH, casein kinase I $\alpha$  shRNA (h) Lentiviral Particles: sc-29912-V and casein kinase I $\alpha$  shRNA (m) Lentiviral Particles: sc-29913-V.

Molecular Weight of casein kinase I $\alpha$ : 38 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or BJAB whole cell lysate: sc-2207.

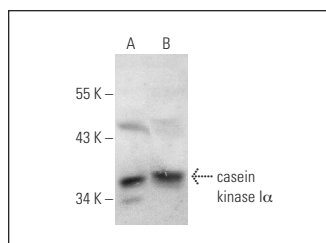
## STORAGE

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

## RESEARCH USE

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

## DATA



casein kinase I $\alpha$  (N-19): sc-6478. Western blot analysis of casein kinase I $\alpha$  expression in BJAB (A) and K-562 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Milne, D.M., et al. 2001. Catalytic activity of protein kinase CK1  $\delta$  (casein kinase I $\delta$ ) is essential for its normal subcellular localization. *Exp. Cell Res.* 263: 43-54.
2. Yamane, K., et al. 2005. CK2 inhibits apoptosis and changes its cellular localization following ionizing radiation. *Cancer Res.* 65: 4362-4367.
3. Stoter, M., et al. 2005. Inhibition of casein kinase I $\delta$  alters mitotic spindle formation and induces apoptosis in trophoblast cells. *Oncogene* 24: 7964-7975.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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