

casein kinase I α (H-7): sc-74582

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, membrane trafficking, circadian rhythm, cell cycle progression, chromosome segregation, apoptosis and cellular differentiation. Casein kinase I α , also known as CSNK1A1L, is a 337 amino acid protein that shares a high degree of sequence similarity with the alpha isoform of casein kinase 1. Casein kinase I α resides in the cytoplasm and participates in the Wnt signaling pathway. By utilizing ATP within its protein kinase domain, Casein kinase I α phosphorylates a large number of proteins.

CHROMOSOMAL LOCATION

Genetic locus: CSNK1A1 (human) mapping to 5q32, Csnk1a1 (mouse) mapping to 18 E1.

SOURCE

casein kinase I α (H-7) is a mouse monoclonal antibody raised against amino acids 281-337 mapping at the C-terminus of casein kinase I α of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

casein kinase I α (H-7) is available conjugated to agarose (sc-74582 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74582 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74582 PE), fluorescein (sc-74582 FITC), Alexa Fluor[®] 488 (sc-74582 AF488), Alexa Fluor[®] 546 (sc-74582 AF546), Alexa Fluor[®] 594 (sc-74582 AF594) or Alexa Fluor[®] 647 (sc-74582 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-74582 AF680) or Alexa Fluor[®] 790 (sc-74582 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

casein kinase I α (H-7) is recommended for detection of casein kinase I α of mouse, rat and human 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); also recommended for detection of CSNK1A1L of human origin.

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

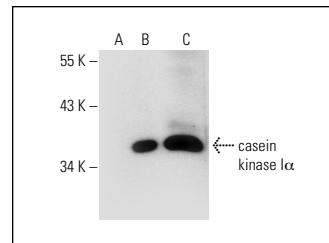
Molecular Weight of casein kinase I α : 38 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, HeLa whole cell lysate: sc-2200 and KNRK whole cell lysate: sc-2214.

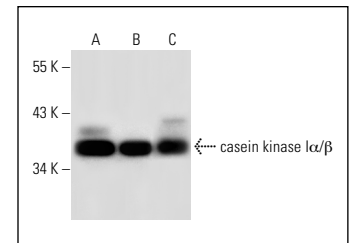
RECOMMENDED SUPPORT REAGENTS

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 α / β (H-7): sc-74582. Western blot analysis of casein kinase I α expression in non-transfected 293 (A), human casein kinase I α transfected 293 (B) and BJAB (C) whole cell lysates.



casein kinase I α / β (H-7): sc-74582. Western blot analysis of casein kinase I α / β expression in BJAB (A), HeLa (B) and KNRK (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Cwiek, P., et al. 2015. RNA interference screening identifies a novel role for PCTK1/CDK16 in medulloblastoma with c-Myc amplification. *Oncotarget* 6: 116-129.
- Pai, V.C., et al. 2018. ASPM promotes prostate cancer stemness and progression by augmenting Wnt-Dvl-3- β -catenin signaling. *Oncogene* 38: 1340-1353.
- Oliveira, L.A., et al. 2019. The canonical Wnt pathway in gastric carcinoma. *Arq. Bras. Cir. Dig.* 32: e1414.
- Gehring, T., et al. 2019. MALT1 phosphorylation controls activation of T lymphocytes and survival of ABC-DLBCL tumor cells. *Cell Rep.* 29: 873-888.
- Nicolau, C.A., et al. 2020. TAK1 lessens the activity of the paracaspase MALT1 during T cell receptor signaling. *Cell. Immunol.* 353: 104115.

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.

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