

CDKN3 (S-15): sc-34165

BACKGROUND

Cyclin-dependent kinase inhibitor 3 (CDKN3), also designated Cdk2-associated dual specificity phosphatase, cyclin-dependent kinase interactor 1 (CDI1), CIP2, KAP or KAP1, belongs to the protein-tyrosine phosphatase family. CDKN3, a cyclin-dependent kinase inhibitor, interacts and dephosphorylates Cdk2 kinase, which prevents Cdk2 kinase activation. CDKN3 is important in cell cycle regulation. It is a dual specificity phosphatase that is active toward substrates which contain phosphotyrosine or phosphoserine residues. CDKN3 does not interact with Cdk4, but can interact with other cyclin-dependent kinases such as Cdc2, Cdk2 and Cdk3. The gene encoding for the CDKN3 protein maps to chromosome 14q22. This gene has been noted to be mutated, overexpressed or deleted in many cancers. Defects in the CDKN3 gene may be implicated in hepatocellular carcinoma (HCC).

REFERENCES

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2. Hannon, G.J., et al. 1994. KAP: a dual specificity phosphatase that interacts with cyclin-dependent kinases. *Proc. Natl. Acad. Sci. USA* 91: 1731-1735.
3. Demetrick, D.J., et al. 1995. Chromosomal mapping of the genes for the human cell cycle proteins cyclin C (CCNC), cyclin E (CCNE), p21 (CDKN1) and KAP (CDKN3). *Cytogenet. Cell Genet.* 69: 190-192.
4. Yeh, C.T., et al. 2000. Aberrant transcripts of the cyclin-dependent kinase-associated protein phosphatase in hepatocellular carcinoma. *Cancer Res.* 60: 4697-4700.
5. Maak, S., et al. 2002. Rapid communication: nucleotide sequence and physical mapping of the porcine cyclin-dependent kinase inhibitor 3 (CDKN3) gene. *J. Anim. Sci.* 80: 1698-1699.
6. Maak, S., et al. 2003. Characterization of the porcine CDKN3 gene as a potential candidate for congenital splay leg in piglets. *Genet. Sel. Evol.* 1: S157-S165.

CHROMOSOMAL LOCATION

Genetic locus: CDKN3 (human) mapping to 14q22.2; Cdkn3 (mouse) mapping to 14 C1.

SOURCE

CDKN3 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CDKN3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34165 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

CDKN3 (S-15) is recommended for detection of CDKN3 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CDKN3 (S-15) is also recommended for detection of CDKN3 in additional species, including equine.

Suitable for use as control antibody for CDKN3 siRNA (h): sc-43877, CDKN3 siRNA (m): sc-45278, CDKN3 shRNA Plasmid (h): sc-43877-SH, CDKN3 shRNA Plasmid (m): sc-45278-SH, CDKN3 shRNA (h) Lentiviral Particles: sc-43877-V and CDKN3 shRNA (m) Lentiviral Particles: sc-45278-V.

Molecular Weight (predicted) of CDKN3: 24 kDa.

Molecular Weight (observed) of CDKN3: 34 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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



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Try **CDKN3 (39): sc-135864**, our highly recommended monoclonal alternative to CDKN3 (S-15).