

# $\alpha$ -protein kinase 1 (C-14): sc-161294

## BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis.  $\alpha$ -protein kinase 1, also known as ALPK1, LAK or KIAA1527, is a 1,244 amino acid protein that contains one  $\alpha$ -type protein kinase domain and belongs to the protein kinase superfamily. Expressed at high levels in liver,  $\alpha$ -protein kinase 1 recognizes and phosphorylates specific phosphorylation sites that are surrounded by peptides which have an  $\alpha$ -helical conformation. One of the targets of  $\alpha$ -protein kinase 1 is Myosin I and, via its ability to phosphorylate Myosin I,  $\alpha$ -protein kinase 1 is thought to play an important role in the apical trafficking of vesicles carrying raft-associated sucrase-isomaltase (SI).

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: ALPK1 (human) mapping to 4q25; Alpk1 (mouse) mapping to 3 G2.

## SOURCE

$\alpha$ -protein kinase 1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of  $\alpha$ -protein kinase 1 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-161294 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

$\alpha$ -protein kinase 1 (C-14) is recommended for detection of  $\alpha$ -protein kinase 1 of mouse, rat and human 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); non cross-reactive with  $\alpha$ -protein kinase 2 or  $\alpha$ -protein kinase 3.

$\alpha$ -protein kinase 1 (C-14) is also recommended for detection of  $\alpha$ -protein kinase 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for  $\alpha$ -protein kinase 1 siRNA (h): sc-89309,  $\alpha$ -protein kinase 1 siRNA (m): sc-140597,  $\alpha$ -protein kinase 1 shRNA Plasmid (h): sc-89309-SH,  $\alpha$ -protein kinase 1 shRNA Plasmid (m): sc-140597-SH,  $\alpha$ -protein kinase 1 shRNA (h) Lentiviral Particles: sc-89309-V and  $\alpha$ -protein kinase 1 shRNA (m) Lentiviral Particles: sc-140597-V.

Molecular Weight of  $\alpha$ -protein kinase 1: 140 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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.

## RESEARCH USE

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

## PROTOCOLS

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