

α -protein kinase 2 (D-20): sc-84676

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. α -protein kinase 2, also known as ALPK2 or HAK (Heart α -protein kinase), is a 2,170 amino acid member of the protein kinase superfamily and contains one α -type protein kinase domain and one Ig-like domain. Expressed at higher levels in heart tissue, α -protein kinase 2 recognizes and phosphorylates specific phosphorylation sites that are surrounded by peptides which have an α -helical conformation, possibly playing a role in vesicle trafficking.

REFERENCES

- Ryazanov, A.G., Pavur, K.S. and Dorovkov, M.V. 1999. α -kinases: a new class of protein kinases with a novel catalytic domain. *Curr. Biol.* 9: R43-R45.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607347. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Drennan, D. and Ryazanov, A.G. 2004. α -kinases: analysis of the family and comparison with conventional protein kinases. *Prog. Biophys. Mol. Biol.* 85: 1-32.
- Heine, M., Cramm-Behrens, C.I., Ansari, A., Chu, H.P., Ryazanov, A.G., Naim, H.Y. and Jacob, R. 2005. α -kinase 1, a new component in apical protein transport. *J. Biol. Chem.* 280: 25637-25643.
- Thébault, S., Cao, G., Venselaar, H., Xi, Q., Bindels, R.J. and Hoenderop, J.G. 2008. Role of the α -kinase domain in transient receptor potential melastatin 6 channel and regulation by intracellular ATP. *J. Biol. Chem.* 283: 19999-20007.

CHROMOSOMAL LOCATION

Genetic locus: ALPK2 (human) mapping to 18q21.31; Alpk2 (mouse) mapping to 18 E1.

SOURCE

α -protein kinase 2 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of α -protein kinase 2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-84676 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

α -protein kinase 2 (D-20) is recommended for detection of α -protein kinase 2 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).

Suitable for use as control antibody for α -protein kinase 2 siRNA (h): sc-72409, α -protein kinase 2 siRNA (m): sc-140598, α -protein kinase 2 shRNA Plasmid (h): sc-72409-SH, α -protein kinase 2 shRNA Plasmid (m): sc-140598-SH, α -protein kinase 2 shRNA (h) Lentiviral Particles: sc-72409-V and α -protein kinase 2 shRNA (m) Lentiviral Particles: sc-140598-V.

Molecular Weight of α -protein kinase 2: 210 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™ 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.

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.