SANTA CRUZ BIOTECHNOLOGY, INC.

VHY (A-12): sc-47675

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mitogen-activated protein (MAP) kinases are a large class of proteins involved in signal transduction pathways that are activated by a range of stimuli and mediate a number of physiological and pathological changes in the cell. Dual specificity phosphatases (DSPs) are a subclass of the protein tyrosine phosphatase (PTP) gene superfamily, which are selective for dephosphorylating critical phosphothreonine and phosphotyrosine residues within MAP kinases. DSP gene expression is induced by a host of growth factors and/or cellular stresses, thereby negatively regulating MAP kinase superfamily members including MAPK/ERK, SAPK/JNK and p38. VH1-related member Y (VHY) is a member of a subgroup of myristoylated VH1-like small dual specificity phosphatases. It is highly expressed in testis, specifically in pachytene spermatocytes (midstage of meiotic division I) and round spermatids. VHY localizes to the plasma membrane in transfected 293T or NIH/3T3 cells.

REFERENCES

1. Keyse, S.M. 1995 An emerging family of dual specificity MAP kinase phosphatases. Biochim. Biophys. Acta. 1265: 152-160.
2. Sun, H. 1998. Functional studies of dual-specificity phosphatases. Methods Mol. Biol. 84: 307-18.
3. Camps, M., et al. 2000. Dual specificity phosphatases: a gene family for control of MAP kinase function. FASEB J. 14: 6-16.
4. Alonso, A., et al. 2004. VHY, a novel myristoylated testis-restricted dual specificity protein phosphatase related to VHX. J. Biol. Chem. 279: 32586-32591.
5. Alonso, A., et al. 2004. The minimal essential core of a cysteine-based protein-tyrosine phosphatase revealed by a novel 16 kDa VH1-like phosphatase, VHZ. J. Biol. Chem. 279: 35768-35774.
6. Yoon, T,S., et al. 2005. Crystal structure of the catalytic domain of human VHY, a dual-specificity protein phosphatase. Proteins 61: 694-697.

CHROMOSOMAL LOCATION

Genetic locus: (human) mapping to ; (mouse) mapping to .

SOURCE

VHY (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VHY 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-47675 P, (100 µg pep-tide 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

VHY (A-12) is recommended for detection of VHY of 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 VHY siRNA (h): sc-61786.

Molecular Weight of VHY: 26 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.