

VHY (h): 293T Lysate: sc-116612

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: 307-318.
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: DUSP15 (human) mapping to 20q11.21.

PRODUCT

VHY (h): 293T Lysate represents a lysate of human VHY transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

VHY (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive VHY antibodies. Recommended use: 10-20 µl per lane.

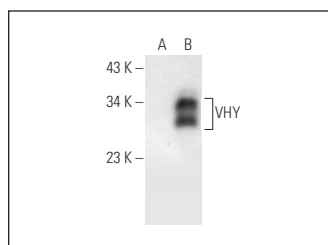
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

VHY (F-11): sc-393888 is recommended as a positive control antibody for Western Blot analysis of enhanced human VHY expression in VHY transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



VHY (F-11): sc-393888. Western blot analysis of VHY expression in non-transfected: sc-117752 (A) and human VHY transfected: sc-116612 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.