



DUSP5 (h): 293T Lysate: sc-177147

BACKGROUND

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. The members of the dual-specificity phosphatase protein family include MKP-1/CL100 (3CH134), MKP-2, MKP-3, MKP-4, MKP-5, MKP-6, MKP-7, MKP-X, VHR, VHY, PAC-1, hVH-3 (B23), hVH-5, PYST2, DUSP1, DUSP5, DUSP8, PIR1 and SKRP1. DUSP5 is a nuclear phosphoprotein that displays phosphatase activity toward several different substrates. It shows the highest relative activity toward ERK 1.

REFERENCES

1. Ishibashi, T., Bottaro, D.P., Michieli, P., Kelley, C.A. and Aaronson, S.A. 1994. A novel dual specificity phosphatase induced by serum stimulation and heat shock. *J. Biol. Chem.* 269: 29897-29902.
2. Kwak, S.P. and Dixon, J.E. 1995. Multiple dual specificity protein tyrosine phosphatases are expressed and regulated differentially in liver cell lines. *J. Biol. Chem.* 270: 1156-1160.
3. Cahir-McFarland, E.D., Carter, K., Rosenwald, A., Giltane, J.M., Henrickson, S.E., Staudt, L.M. and Kieff, E. 2004. Role of NFκB in cell survival and transcription of latent membrane protein 1-expressing or Epstein-Barr virus latency III-infected cells. *J. Virol.* 78: 4108-4119.
4. Tullai, J.W., Schaffer, M.E., Mullenbrock, S., Kasif, S. and Cooper, G.M. 2004. Identification of transcription factor binding sites upstream of human genes regulated by the phosphatidylinositol 3-kinase and MEK/ERK signaling pathways. *J. Biol. Chem.* 279: 20167-20177.
5. Sumanas, S., Joraniak, T. and Lin, S. 2005. Identification of novel vascular endothelial-specific genes by the microarray analysis of the zebrafish cloche mutants. *Blood* 106: 534-541.
6. Mandl, M., Slack, D.N. and Keyse, S.M. 2005. Specific inactivation and nuclear anchoring of extracellular signal-regulated kinase 2 by the inducible dual-specificity protein phosphatase DUSP5. *Mol. Cell. Biol.* 25: 1830-1845.

CHROMOSOMAL LOCATION

Genetic locus: DUSP5 (human) mapping to 10q25.2.

PRODUCT

DUSP5 (h): 293T Lysate represents a lysate of human DUSP5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

DUSP5 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive DUSP5 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.

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.