SANTA CRUZ BIOTECHNOLOGY, INC.

p-NSP3 (Tyr 793): sc-33050

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The Power to Question

BACKGROUND

The Eph family of receptor tyrosine kinases has been implicated in many developmental patterning processes, including cell segregation, cell migration and axon guidance. An intermediate that is involved in the signaling pathways of the Eph receptors is novel SH2-containing protein 3 (NSP3, also designated SH2 domain-containing Eph receptor-binding protein 1, SHEP1, Cas or HEF1 associated signal transducer), expressed in both the embryonic and adult brain. NSP3 contains a Src homology 2 domain that binds to a conserved tyrosine-phosphorylated motif in the juxtamembrane region of the EphB2 receptor. NSP3 may itself be a target of EphB2 kinase activity since it becomes heavily tyrosine-phosphorylated in cells expressing activated EphB2. NSP3 directly links activated, tyrosine-phosphorylated Eph receptors to small Ras superfamily GTPases.

REFERENCES

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3. Pasquale, E.B. 1997. The Eph family of receptors. Curr. Opin. Cell Biol. 9: 608-615.
4. Wang, H.U., et al. 1997. Eph family transmembrane ligands can mediate repulsive guidance of trunk neural crest migration and motor axon outgrowth. Neuron 18: 383-396.
5. Meima, L., et al. 1997. LERK-2 (ephrin-B1) is a collapsing factor for a subset of cortical growth cones and acts by a mechanism different from AL-1 (ephrin-A5). Mol. Cell. Neurosci. 9: 314-328.
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7. Bruckner, K. and Klein, R. 1998. Signaling by Eph receptors and their ephrin ligands. Curr. Opin. Neurobiol. 8: 375-382.
8. Dodelet, V.C., et al. 1999. A novel signaling intermediate, SHEP1, directly couples Eph receptors to R-Ras and Rap 1A. J. Biol. Chem. 274: 31941-31946.

CHROMOSOMAL LOCATION

Genetic locus: SH2D3C (human) mapping to 9q34.11; Sh2d3c (mouse) mapping to 2 B.

SOURCE

p-NSP3 (Tyr 793) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 793 NSP3 of human origin.

STORAGE

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

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-33050 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-NSP3 (Tyr 793) is recommended for detection of Tyr 793 phosphorylated NSP3 of human origin, Tyr 787 phosphorylated NSP3 of mouse origin, and correspondingly phosphorylated NSP3 of rat, equine, canine, bovine, porcine and avian 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).

p-NSP3 (Tyr 793) is also recommended for detection of correspondingly phosphorylated NSP3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NSP3 siRNA (h): sc-44855, NSP3 siRNA (m): sc-44856, NSP3 shRNA Plasmid (h): sc-44855-SH, NSP3 shRNA Plasmid (m): sc-44856-SH, NSP3 shRNA (h) Lentiviral Particles: sc-44855-V and NSP3 shRNA (m) Lentiviral Particles: sc-44856-V.

Molecular Weight of p-NSP3: 94 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.