

Inactive DUSP27 (G-17): sc-168189

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. Inactive DUSP27 (Inactive dual specificity phosphatase 27) is a 1,158 amino acid protein belonging to the protein-tyrosine phosphatase family and the non-receptor class dual specificity subfamily. Inactive DUSP27 contains one tyrosine-protein phosphatase domain and, in contrast to other members of the family, it lacks the conserved active cysteine in position 225 which is replaced by a serine residue, suggesting that it is inactive.

REFERENCES

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3. Aoki, N., et al. 2001. A growing family of dual specificity phosphatases with low molecular masses. *J. Biochem.* 130: 133-140.
4. Friedberg, I., et al. 2007. Identification and characterization of DUSP27, a novel dual-specific protein phosphatase. *FEBS Lett.* 581: 2527-2533.
5. Teng, C.H., et al. 2007. Several dual specificity phosphatases coordinate to control the magnitude and duration of JNK activation in signaling response to oxidative stress. *J. Biol. Chem.* 282: 28395-28407.
6. Salojin, K., et al. 2007. Regulation of innate immunity by MAPK dual-specificity phosphatases: knockout models reveal new tricks of old genes. *J. Leukoc. Biol.* 81: 860-869.
7. Jeffrey, K.L., et al. 2007. Targeting dual-specificity phosphatases: manipulating MAP kinase signalling and immune responses. *Nat. Rev. Drug Discov.* 6: 391-403.

CHROMOSOMAL LOCATION

Genetic locus: DUSP27 (human) mapping to 1q24.1; Dusp27 (mouse) mapping to 1 H2.3.

SOURCE

Inactive DUSP27 (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Inactive DUSP27 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-168189 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Inactive DUSP27 (G-17) is recommended for detection of Inactive DUSP27 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); non cross-reactive with other DUSP family members.

Suitable for use as control antibody for Inactive DUSP27 siRNA (h): sc-106835, Inactive DUSP27 siRNA (m): sc-146233, Inactive DUSP27 shRNA Plasmid (h): sc-106835-SH, Inactive DUSP27 shRNA Plasmid (m): sc-146233-SH, Inactive DUSP27 shRNA (h) Lentiviral Particles: sc-106835-V and Inactive DUSP27 shRNA (m) Lentiviral Particles: sc-146233-V.

Molecular Weight of Inactive DUSP27: 130 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.