

## DUSP27 (A-14): sc-79462

### 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. DUSP27 (dual specificity phosphatase 27), also known as FMDSF or DUPD1 (dual specificity phosphatase and pro isomerase domain containing 1), is a 220 amino acid cytoplasmic protein that belongs to the protein-tyrosine phosphatase family. Expressed in skeletal muscle, liver and adipose tissue, DUSP27 may play a role in energy metabolism. The gene encoding DUSP27 is referred to as DUPD1 and maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

### REFERENCES

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- Teng, C.H., Huang, W.N. and Meng, T.C. 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.
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- Jeffrey, K.L., Camps, M., Rommel, C. and Mackay, C.R. 2007. Targeting dual-specificity phosphatases: manipulating MAP kinase signalling and immune responses. *Nat. Rev. Drug Discov.* 6: 391-403.

### CHROMOSOMAL LOCATION

Genetic locus: DUPD1 (human) mapping to 10q22.2; Dupd1 (mouse) mapping to 14 A3.

### SOURCE

DUSP27 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 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-79462 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

DUSP27 (A-14) is recommended for detection of DUSP27, also known as DUPD1 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).

Suitable for use as control antibody for DUSP27 siRNA (h): sc-77206, DUSP27 siRNA (m): sc-77207, DUSP27 shRNA Plasmid (h): sc-77206-SH, DUSP27 shRNA Plasmid (m): sc-77207-SH, DUSP27 shRNA (h) Lentiviral Particles: sc-77206-V and DUSP27 shRNA (m) Lentiviral Particles: sc-77207-V.

Molecular Weight of DUSP27: 27 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.

### SELECT PRODUCT CITATIONS

- Devi, Y.S., et al. 2011. Inhibition of MAPK by prolactin signaling through the short form of its receptor in the ovary and decidua: involvement of a novel phosphatase. *J. Biol. Chem.* 286: 7609-7618.

### 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.



Try **DUSP27 (F-12): sc-515513**, our highly recommended monoclonal alternative to DUSP27 (A-14).