

# DEP-1 (S-15): sc-13801

## BACKGROUND

Density-enhanced phosphatase-1 (DEP-1), a receptor-like protein tyrosine phosphatase, also known as HPTP-eta/CD148, is involved in signal transduction in leukocytes and in the mechanisms of cellular differentiation. DEP-1 consists of an extracellular segment containing eight fibronectin type III repeats, a single transmembrane segment and a single intracellular PTP domain. In lymphoid organs, DEP-1 is widely expressed on B and T cells, granulocytes, macrophages, certain dendritic cells, mature thymocytes and neutrophils. In non-lymphoid tissues, it is expressed on fibrocytes, melanocytes and Schwann cells, and many epithelial cell types with glandular and/or endocrine differentiation. In Jurkat T cells, DEP-1 inhibits TCR-mediated activation, which results in reduced expression of the early activation of Ag CD69, inhibition of tyrosine phosphorylation of many intracellular proteins, including tyrosine kinase ZAP-70 and impairment of mitogen-activated protein kinase activation. In spite of its intrinsic enzymatic activity, DEP-1 can induce protein tyrosine phosphorylation in human lymphocytes, and serine/ threonine and/or tyrosine phosphorylation in tumor cell lines.

## REFERENCES

1. Ostman, A., et al. 1994. Expression of DEP-1, a receptor-like protein tyrosine phosphatase, is enhanced with increasing cell density. *Proc. Natl. Acad. Sci. USA* 91: 9680-9684.
2. Honda, H., et al. 1994. Molecular cloning, characterization, and chromosomal localization of a novel protein tyrosine phosphatase, HPTA-eta. *Blood* 84: 4186-4194.
3. Borges, L.G., et al. 1996. Cloning and characterization of rat density-enhanced phosphatase-1, a protein tyrosine phosphatase expressed by vascular cells. *Circ. Res.* 79: 570-580.
4. Palou, E., et al. 1997. CD148, a membrane protein tyrosine phosphatase, is able to induce tyrosine phosphorylation on human lymphocytes. *Immunol. Lett.* 57: 101-103.
5. Jallat, B., et al. 1997. The receptor-like protein tyrosine phosphatase DEP-1 is constitutively associated with a 64 kDa protein serine/threonine kinase. *J. Biol. Chem.* 272: 12158-12163.

## CHROMOSOMAL LOCATION

Genetic locus: Ptprrj (rat) mapping to 3.

## SOURCE

DEP-1 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DEP-1 of rat 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-13801 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DEP-1 (S-15) is recommended for detection of DEP-1 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

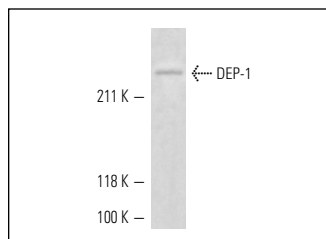
Molecular Weight of DEP-1: 180-220 kDa.

Positive Controls: rat PBL whole cell lysate.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



DEP-1 (S-15): sc-13801. Western blot analysis of DEP-1 expression in rat PBL whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Zhan, X., et al. 2008. Targets of tyrosine nitration in diabetic rat retina. *Mol. Cell. Proteomics* 7: 864-874.

## 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **DEP-1 (B-2): sc-390404**, our highly recommended monoclonal alternative to DEP-1 (S-15).