

# DEP-1 (F-12): sc-376794

## 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

- 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.
- Honda, H., et al. 1994. Molecular cloning, characterization, and chromosomal localization of a novel protein tyrosine phosphatase, HPTP- $\eta$ . Blood 84: 4186-4194.

## CHROMOSOMAL LOCATION

Genetic locus: PTPRJ (human) mapping to 11p11.2.

## SOURCE

DEP-1 (F-12) is a mouse monoclonal antibody raised against amino acids 1-300 of DEP-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DEP-1 (F-12) is available conjugated to agarose (sc-376794 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376794 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376794 PE), fluorescein (sc-376794 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376794 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376794 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376794 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376794 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376794 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376794 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

DEP-1 (F-12) is recommended for detection of DEP-1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 DEP-1 siRNA (h): sc-35189, DEP-1 shRNA Plasmid (h): sc-35189-SH and DEP-1 shRNA (h) Lentiviral Particles: sc-35189-V.

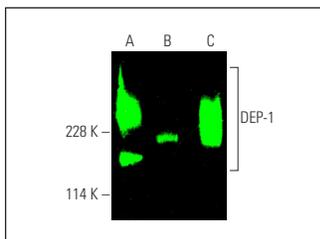
Molecular Weight of DEP-1: 220-250 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Raji whole cell lysate: sc-364236 or THP-1 cell lysate: sc-2238.

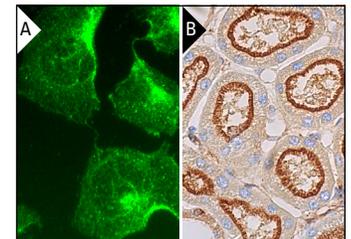
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



DEP-1 (F-12): sc-376794. Near-infrared western blot analysis of DEP-1 expression in THP-1 (A), Raji (B) and HL-60 (C) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgG $\kappa$  BP-CFL 680: sc-516180.



DEP-1 (F-12): sc-376794. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane staining of cells in tubules (B).

## SELECT PRODUCT CITATIONS

- Deschepper, F.M., et al. 2020. L1CAM as an E-Selectin ligand in colon cancer. Int. J. Mol. Sci. 21: 8286.
- Zhang, Y., et al. 2022. Aurora kinase inhibitor MLN8237 suppresses pancreatic cancer growth. Pancreatology 22: 619-625.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.