

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human DEP-1/CD148 in Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 143-41
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Phytohemagglutinin-stimulated human peripheral blood mononuclear cells
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	Human peripheral blood lymphocytes

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> ● 12 months from date of receipt, 2 to 8 °C as supplied.

#### BACKGROUND

Density Enhanced Protein Tyrosine Phosphatase (DEP-1), also known as CD148, HPTP-eta, and PTP receptor type J (PTPRJ), is an enzyme that removes phosphate groups covalently attached to tyrosine residues in proteins. A large (220 kDa) glycoprotein found at the cell surface, DEP-1 levels are increased with high cell density (1). DEP-1 phosphatase activity is enhanced by basement membrane proteins (2), suggesting it is involved in regulating cell adhesion and contact interactions. High levels of expression dampen PDGF (3), VEGF (4), and T-cell receptor (5) responses. DEP-1 is widely expressed in tissues, particularly ones forming epithelioid monolayers (6). In the immune system, DEP-1 is found on all cell lineages and is highest on granulocytes (7). *Dep-1* is the mutated gene in the Susceptibility to Colon Cancer locus *Sccl1*, which is altered in many human colorectal adenomas (8). Gene knockout mice lacking DEP-1 die at midgestation due to failures in cardiovascular development (9). DEP-1 dephosphorylates a variety of proteins, including the HGF (10), PDGF (11), and VEGF (4) receptors, and beta-catenin (12). The recombinant protein is the intracellular region of DEP-1 containing the catalytic domain.

#### References:

- Ostman, A. *et al.* (1994) Proc. Natl. Acad. Sci. USA **91**:9680.
- Sorby, M. *et al.* (2001) Oncogene **20**:5219.
- Jandt, E. *et al.* (2003) Oncogene **22**:4175.
- Lampugnani, M.G. *et al.* (2003) J. Cell Biol. **161**:793.
- Baker, J.E. *et al.* (2001) Mol. Cell. Biol. **21**:2393.
- Borges, L.G. *et al.* (1996) Circ. Res. **79**:570.
- de la Fuente-Garcia, M.A. *et al.* (1998) Blood **91**:2800.
- Ruivenkamp, C.A. *et al.* (2002) Nat. Genet. **31**:295.
- Takahashi, T. *et al.* (2003) Mol. Cell. Biol. **23**:1817.
- Palka, H.L. *et al.* (2003) J. Biol. Chem. **278**:5728.
- Kovalenko, M. *et al.* (2000) J. Biol. Chem. **275**:16219.
- Holsinger, L.J. *et al.* (2002) Oncogene **21**:7067.

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.