

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human DEP-1/CD148.
Source	Monoclonal Mouse IgG _{2B} Clone # 261922
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human DEP-1/CD148 Arg997-Ala1337 Accession # Q12913
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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
Flow Cytometry	0.25 µg/10 ⁶ cells	Human whole blood
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 kilodalton) 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 *Sccl*, 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:

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