

DESCRIPTION

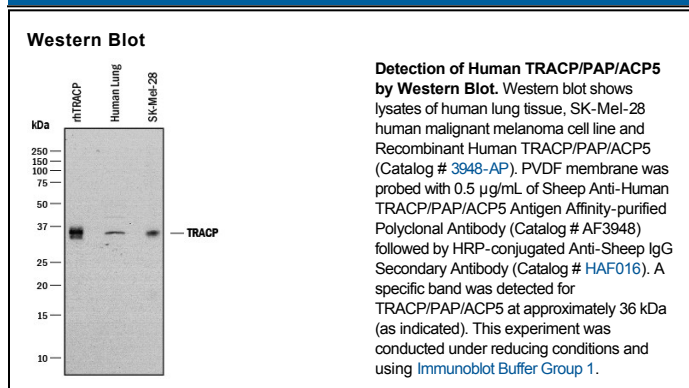
Species Reactivity	Human
Specificity	Detects human TRACP/PAP/ACP5 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TRACP/PAP/ACP5 Ala22-Pro320 Accession # P13686
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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
Western Blot	0.5 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human TRACP/PAP/ACP5 (Catalog # 3948-AP), see our available Western blot detection antibodies

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

Encoded by the ACP5 gene, Tartrate Resistant Acid Phosphatase (TRACP or TRAP) is also known as Purple Acid Phosphatase (PAP) or Acid Phosphatase 5 (ACP5) (1). The deduced amino acid (aa) sequence of human ACP5 predicts a signal peptide (aa 1 to 21) and a mature chain (aa 22 to 325). R&D Systems' recombinant human ACP5 consists of aa 22 to 320, without the last 5 residues, RRARP.

ACP5 is expressed at high levels by osteoclasts, macrophages and dendritic cells (2). Two forms, 5a and 5b, circulating in human blood, are derived from different cell types and have different functions. Derived from macrophages and dendritic cells, 5a is a marker of inflammatory conditions. Derived from osteoclasts, 5b is a marker of bone resorption. Compared to 5a, 5b does not contain sialic acid residues, has a higher specific activity and pH optimum, and may be processed into a disulfide-linked dimer (3).

References:

1. Jankkila, A.J. and J.M. Halleen (2003) J. Bone Miner. Res. **18**:1892.
2. Halleen, J.M. *et al.* (2006) Clin. Lab. **52**:499.
3. Jankkila, A.J. *et al.* (2003) J. Bone Miner. Res. **18**:1916.