

Anti-TFRC Picoband Antibody
Catalog # ABO11924**Specification****Anti-TFRC Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	P02786
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Transferrin receptor protein 1(TFRC) detection. Tested with WB, IHC-P in Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-TFRC Picoband Antibody - Additional Information

Gene ID 7037

Other Names

Transferrin receptor protein 1, TR, TfR, TfR1, Trfr, T9, p90, CD71, Transferrin receptor protein 1, serum form, sTfR, TFRC

Calculated MW

84871 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Cell membrane ; Single-pass type II membrane protein . Melanosome . Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Protein Name

Transferrin receptor protein 1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

E.coli-derived human TFRC recombinant protein (Position: M1-N198). Human TFRC shares 72% and 70% amino acid (aa) sequences identity with mouse and rat TFRC, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the peptidase M28 family. M28B subfamily.

Anti-TFRC Picoband Antibody - Protein Information

Name TFRC

Function

Cellular uptake of iron occurs via receptor-mediated endocytosis of ligand-occupied transferrin receptor into specialized endosomes (PubMed: [26214738](http://www.uniprot.org/citations/26214738)). Endosomal acidification leads to iron release. The apotransferrin-receptor complex is then recycled to the cell surface with a return to neutral pH and the concomitant loss of affinity of apotransferrin for its receptor. Transferrin receptor is necessary for development of erythrocytes and the nervous system (By similarity). A second ligand, the hereditary hemochromatosis protein HFE, competes for binding with transferrin for an overlapping C-terminal binding site. Positively regulates T and B cell proliferation through iron uptake (PubMed: [26642240](http://www.uniprot.org/citations/26642240)). Acts as a lipid sensor that regulates mitochondrial fusion by regulating activation of the JNK pathway (PubMed: [26214738](http://www.uniprot.org/citations/26214738)). When dietary levels of stearate (C18:0) are low, promotes activation of the JNK pathway, resulting in HUWE1-mediated ubiquitination and subsequent degradation of the mitofusin MFN2 and inhibition of mitochondrial fusion (PubMed: [26214738](http://www.uniprot.org/citations/26214738)). When dietary levels of stearate (C18:0) are high, TFRC stearylates and thus inhibits activation of the JNK pathway and thus degradation of the mitofusin MFN2 (PubMed: [26214738](http://www.uniprot.org/citations/26214738)). Mediates uptake of NICOL1 into fibroblasts where it may regulate extracellular matrix production (By similarity).

Cellular Location

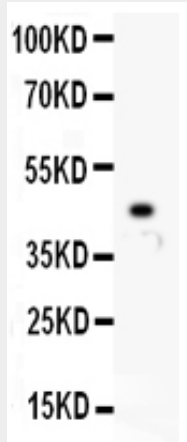
Cell membrane; Single-pass type II membrane protein Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

Anti-TFRC Picoband Antibody - Protocols

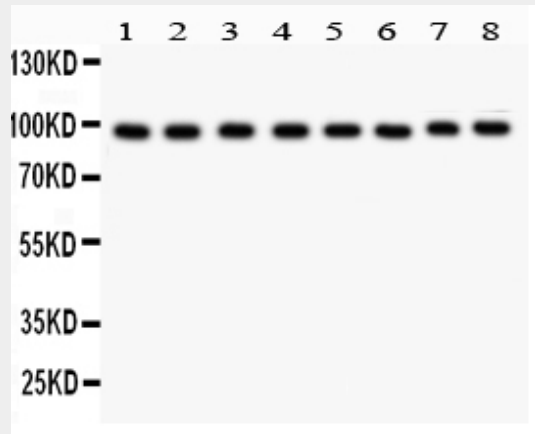
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

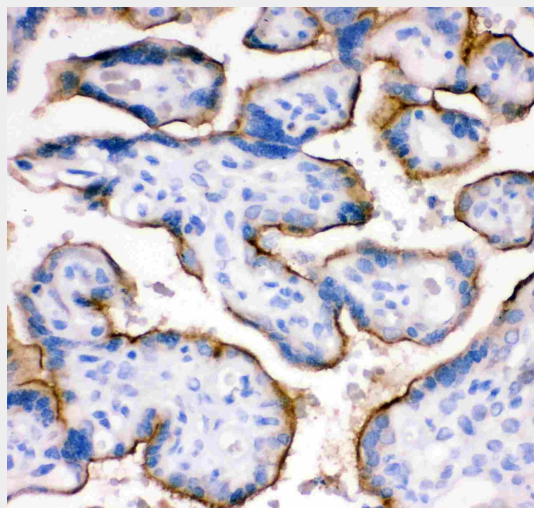
Anti-TFRC Picoband Antibody - Images



Anti- TFRC antibody, ABO11924, Western blotting All lanes: Anti TFRC (ABO11924) at 0.5ug/ml WB: Recombinant Human TRFC Protein 0.5ng Predicted bind size: 45KD Observed bind size: 45KD



Anti- TFRC antibody, ABO11924, Western blotting All lanes: Anti TRFC (ABO11924) at 0.5ug/ml Lane 1: HELA Whole Cell Lysate at 40ug Lane 2: JURAKT Whole Cell Lysate at 40ug Lane 3: RAJI Whole Cell Lysate at 40ug Lane 4: HL-60 Whole Cell Lysate at 40ug Lane 5: K562 Whole Cell Lysate at 40ug Lane 6: HEPG2 Whole Cell Lysate at 40ug Lane 7: Human Placenta Tissue Lysate at 50ug Lane 8: CEM Whole Cell Lysate at 40ug Predicted bind size: 86KD Observed bind size: 98KD



Anti- TFRC antibody, ABO11924,IHC(P)IHC(P): Human Placenta Tissue

Anti-TFRC Picoband Antibody - Background

Transferrin receptor protein 1 (TfR1), also known as Cluster of Differentiation 71 (CD71), is a protein that in humans is encoded by the TFRC gene. It is mapped to 3q29. TFRC is a transmembrane glycoprotein composed of two disulfide-linked monomers joined by two disulfide bonds. Expression of human TFR1 in hamster cell lines markedly enhanced the infection of viruses pseudotyped with the glycoprotein of Machupo, Guanarito, and Junin viruses. TFR1 is a cellular receptor for New World hemorrhagic fever arenaviruses. It is required for iron delivery from transferrin to cells.