

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

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**Anti-TFRC Picoband Antibody - Product Information**

Application	<b>WB, IHC-P</b>
Primary Accession	<a href="#">P02786</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human</b>
Clonality	<b>Polyclonal</b>
Format	<b>Lyophilized</b>

**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<br>Western blot, 0.1-0.5 µg/ml, Human<br>

**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 Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**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 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**

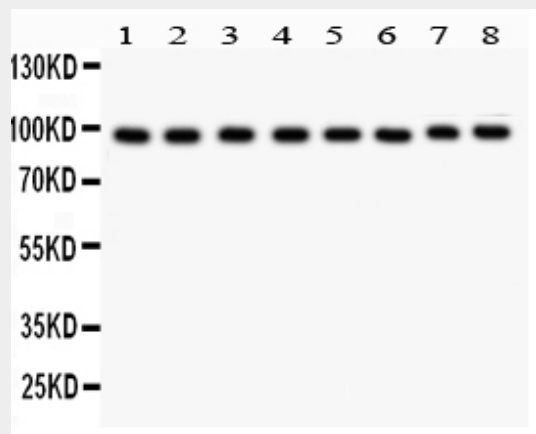
Provided below are standard protocols that you may find useful for product applications.

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

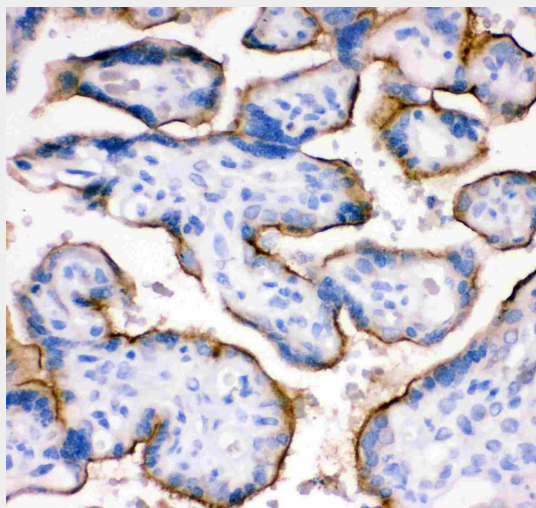
## Anti-TFRC Picoband Antibody - Images



Anti- TFRC antibody, ABO11924, Western blottingAll lanes: Anti TFRC (ABO11924) at 0.5ug/mlWB: Recombinant Human TRFC Protein 0.5ngPredicted bind size: 45KDObserved bind size: 45KD



Anti- TFRC antibody, ABO11924, Western blottingAll lanes: Anti TRFC (ABO11924) at 0.5ug/mlLane 1: HELA Whole Cell Lysate at 40ugLane 2: JURAKT Whole Cell Lysate at 40ugLane 3: RAJI Whole Cell Lysate at 40ugLane 4: HL-60 Whole Cell Lysate at 40ugLane 5: K562 Whole Cell Lysate at 40ugLane 6: HEPG2 Whole Cell Lysate at 40ugLane 7: Human Placenta Tissue Lysate at 50ugLane 8: CEM Whole Cell Lysate at 40ugPredicted bind size: 86KDObserved 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.