

## Anti-Transferrin Receptor/TFRC Antibody Picoband®

Catalog Number: PB9233

### About TFRC

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.

### Overview

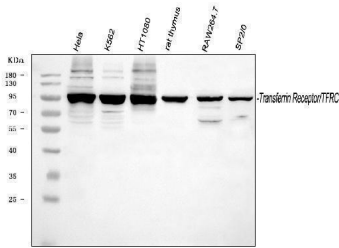
Product Name	Anti-Transferrin Receptor/TFRC Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Transferrin Receptor/TFRC Antibody Picoband® catalog # PB9233. Tested in Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> , and 0.05 mg NaN <sub>3</sub> . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P02786

### Technical Details

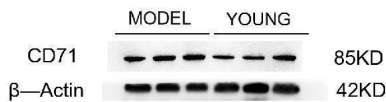
Immunogen	E.coli-derived human TFRC recombinant protein (Position: M1-N198). Human TFRC shares 72% and 70% amino acid (aa) sequences identity with mouse and rat TFRC, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.

Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10 <sup>6</sup> cells, Human

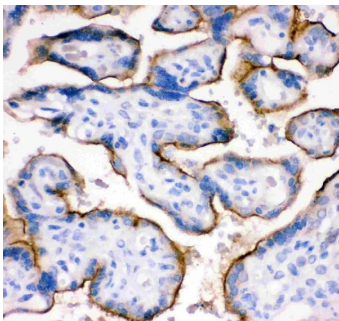
## Anti-Transferrin Receptor/TFRC Antibody Picoband® (PB9233) Images



Western blot analysis of TFRC using anti-TFRC antibody (PB9233). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HeLa whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human HT1080 whole cell lysates, Lane 4: rat thymus tissue lysates, Lane 5: rat RAW264.7 whole cell lysates, Lane 6: mouse SP2/0 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TFRC antigen affinity purified polyclonal antibody (Catalog # PB9233) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for TFRC at approximately 95 kDa. The expected band size for TFRC is at 85 kDa.

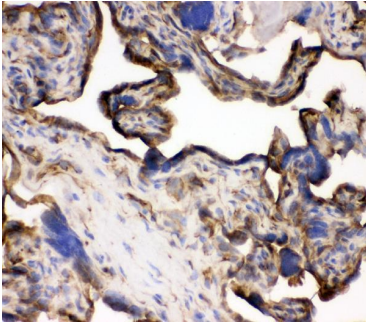


Western blot analysis of TFRC using anti-TFRC antibody (PB9233). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1-3: model group-Mouse uterine tissue, Lane 4-6: young group-Mouse uterine tissue. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TFRC antigen affinity purified polyclonal antibody (PB9233) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) for 1 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for TFRC at approximately 85 kDa. The expected band size for TFRC is at 85 kDa.

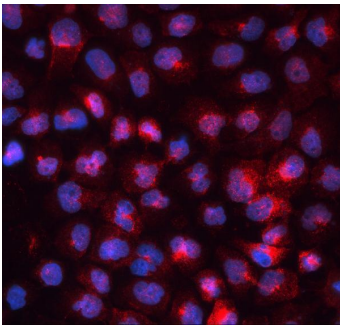


IHC analysis of TFRC using anti-TFRC antibody (PB9233). TFRC was detected in paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-TFRC Antibody (PB9233) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex

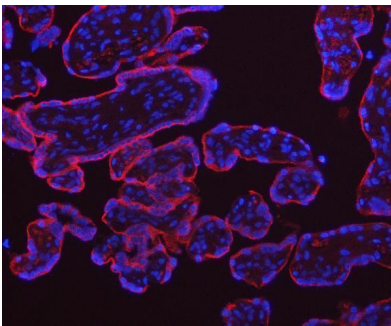
(SABC)(Catalog # SA1022) with DAB as the chromogen.



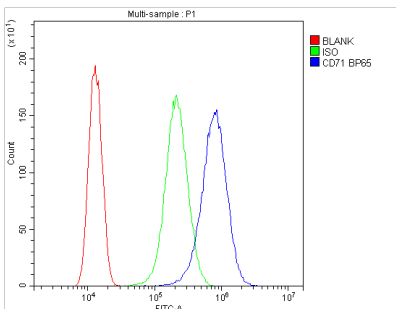
IHC analysis of TFRC using anti-TFRC antibody (PB9233). TFRC was detected in frozen section of human placenta tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-TFRC Antibody (PB9233) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IF analysis of TFRC using anti-TFRC antibody (PB9233). TFRC was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-TFRC Antibody (PB9233) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

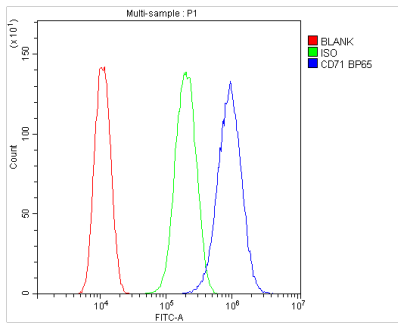


IF analysis of TFRC using anti-TFRC antibody (PB9233). TFRC was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-TFRC Antibody (PB9233) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of SiHa cells using anti-TFRC antibody (PB9233). Overlay histogram showing SiHa cells stained with PB9233 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TFRC Antibody (PB9233, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Flow Cytometry analysis of U87 cells using anti-TFRC antibody (PB9233). Overlay histogram showing U87 cells stained with PB9233 (Blue line). To facilitate intracellular



staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TFRC Antibody (PB9233, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

## 2 Publications Citing This Product

1. PubMed ID: 10.3892/or.2019.7189, Sulfasalazine-induced ferroptosis in breast cancer cells is reduced by the inhibitory effect of estrogen receptor on the transferrin receptor
2. PubMed ID: 28008944, Amyloid precursor protein modulates Nav16 sodium channel currents through a Go-coupled JNK pathway

Visit [bosterbio.com/anti-tfrc-picoband-trade-antibody-pb9233-boster.html](https://bosterbio.com/anti-tfrc-picoband-trade-antibody-pb9233-boster.html) to see all 2 publications.

## Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Anti-Transferrin Receptor/TFRC Antibody

For Research Use Only. Not for use in diagnostic procedures.