

Anti-Transferrin Receptor (CD71) TFRC Rabbit Monoclonal Antibody
Catalog # ABO14315

Specification

Anti-Transferrin Receptor (CD71) TFRC Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IP, FC
Primary Accession	P02786
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-Transferrin Receptor (CD71) TFRC Rabbit Monoclonal Antibody . Tested in WB, IHC, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-Transferrin Receptor (CD71) TFRC Rabbit Monoclonal 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

WB 1:500-1:2000
IHC 1:50-1:200
IP 1:50
FC 1:50

Subcellular Localization

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

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human TFR

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated

freeze-thaw cycles.

Anti-Transferrin Receptor (CD71) TFRC Rabbit Monoclonal 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

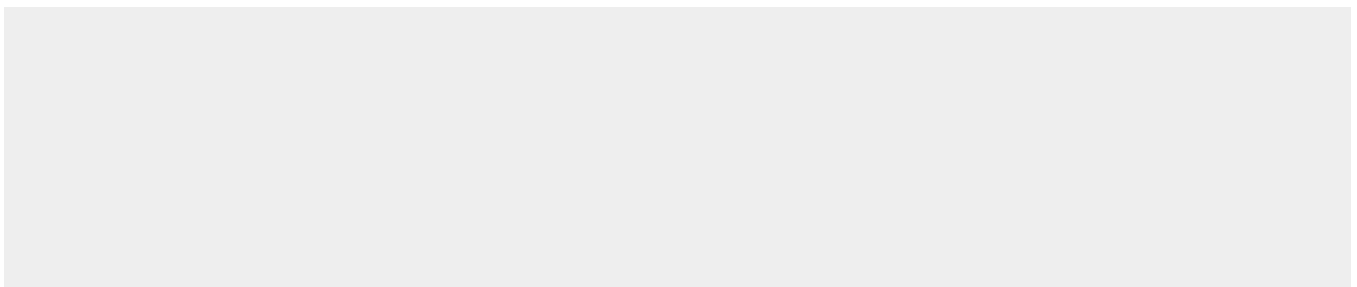
Cell membrane; Single-pass type II membrane protein Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

Anti-Transferrin Receptor (CD71) TFRC Rabbit Monoclonal 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-Transferrin Receptor (CD71) TFRC Rabbit Monoclonal Antibody - Images



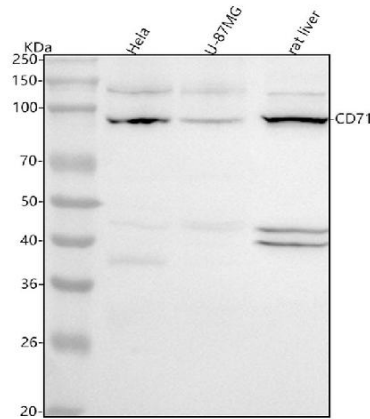


Figure 1. Western blot analysis of CD71 using anti-CD71 antibody (M00591-1).

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 U-87MG whole cell lysates,
Lane 3: rat liver tissue 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-CD71 antigen affinity purified monoclonal antibody (Catalog # M00591-1) at 1:500 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 CD71 at approximately 95 kDa. The expected band size for CD71 is at 85 kDa.

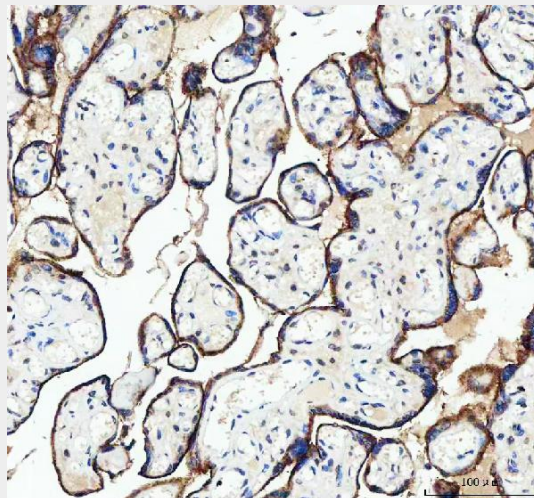


Figure 2. IHC analysis of CD71 using anti-CD71 antibody (M00591-1).

CD71 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 1:50 rabbit anti-CD71 Antibody (M00591-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.