10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TFRC Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM2075b

Specification

TFRC Antibody - Product Information

Application	**WB,E**
Primary Accession	P02786
Other Accession	NP_001121620.1
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgM**
Calculated MW	**84871**
Antigen Region	**649-677**

TFRC 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

Target/Specificity
This TFRC antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 649-677 amino acids from human TFRC.

Dilution
WB~~1:500~1000

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Euglobin precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
TFRC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TFRC 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). 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). Acts as a lipid sensor that regulates mitochondrial fusion by regulating activation of the JNK pathway (PubMed: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). When dietary levels of stearate (C18:0) are high, TFRC stearoylation inhibits activation of the JNK pathway and thus degradation of the mitofusin MFN2 (PubMed:26214738).

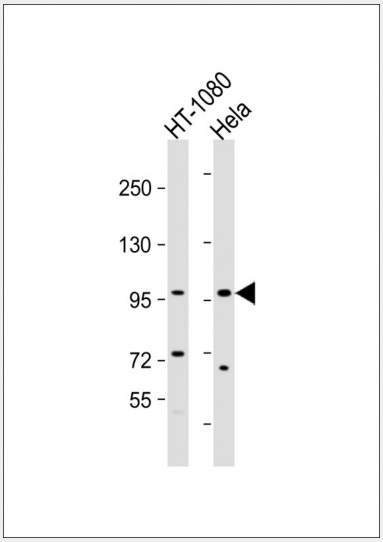
Cellular Location
Cell membrane; Single-pass type II membrane protein Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

TFRC Antibody - Protocols

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

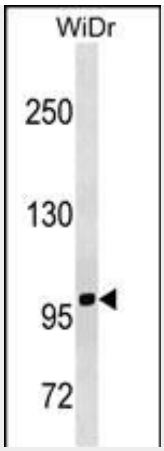
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TFRC Antibody - Images



All lanes : Anti-CD71 Antibody (C-term) at 1:1000 dilution Lane 1: HT-1080 whole cell lysate Lane 2: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgM, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 85 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



TFRC Antibody (Cat. #AM2075b) western blot analysis in WiDr cell line lysates (35µg/lane).This demonstrates the TFRC antibody detected the TFRC protein (arrow).

TFRC Antibody - Background

Cellular uptake of iron occurs via receptor-mediated endocytosis of ligand-occupied transferrin receptor into specialized endosomes. 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 heditary hemochromatosis protein HFE, competes for binding with transferrin for an overlapping C-terminal binding site.

TFRC Antibody - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Ucisik-Akkaya, E., et al. Mol. Hum. Reprod. 16(10):770-777(2010)
Blonde-Cynober, F., et al. Ann. Biol. Clin. (Paris) 68(5):569-575(2010)
Marsee, D.K., et al. Am. J. Clin. Pathol. 134(3):429-435(2010)
Fernandez-Real, J.M., et al. Eur. J. Clin. Invest. 40(7):600-607(2010)