

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~~1:1000

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](#)). Mediates uptake of NICOL1 into fibroblasts where it may regulate extracellular matrix production (By similarity).

Cellular Location

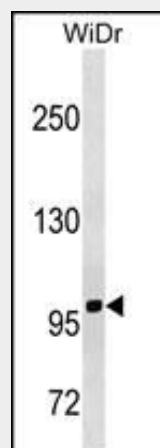
Cell membrane; Single-pass type II membrane protein Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

TFRC Antibody - Protocols

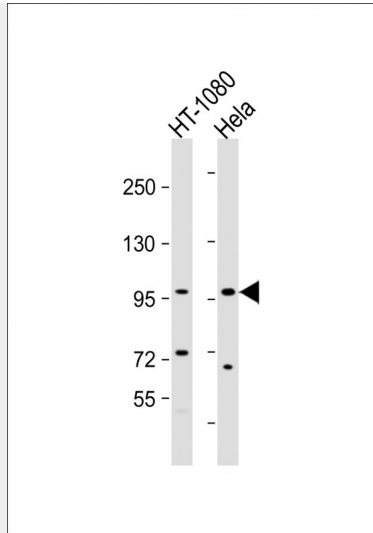
Provided below are standard protocols that you may find useful for product applications.

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

TFRC Antibody - Images



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



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 μ g 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.

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 hereditary 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)