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Anti-CD71 / Transferrin Receptor (TFRC) (Extracellular Domain) Antibody

Mouse Monoclonal Antibody
Catalog # AH13532

Product Information

Application	IF, FC, E
Primary Accession	P02786
Other Accession	529618
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2b, kappa
Clone Names	TFRC/1818
Calculated MW	84871

Additional Information

Gene ID	7037
Other Names	Mtvr-1, p90, TFR1, TFRC transferrin receptor (p90 CD71), TRFR
Application Note	ELISA (Use Ab at 2-4ug/ml for coating) (Order Ab without BSA); ,Flow Cytometry (0.5-1ug/million cells in 0.1ml); Immunofluorescence (1-2ug/ml); ,Immunohistology (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 minutes) ,Western Blotting (0.5-1.0ug/ml),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-CD71 / Transferrin Receptor (TFRC) (Extracellular Domain) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

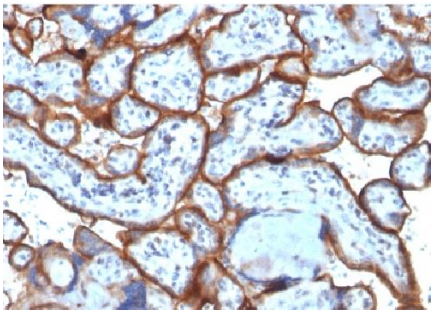
Name	TFRC
Function	Cellular uptake of iron occurs via receptor-mediated endocytosis of ligand-occupied transferrin receptor into specialized endosomes (PubMed:26214738, PubMed:41772062). Endosomal acidification leads to iron

	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

Background

It recognizes a ~90-95kDa protein which is identified as cell surface transferrin receptor (CD71), a disulfide-bonded homodimeric glycoprotein of 180-190kDa. This MAb is highly specific to CD71 and shows no cross-reaction with other related proteins. Ligand for transferrin receptor is the serum iron transport protein, transferrin. This receptor is broadly distributed in carcinomas, sarcomas, leukemias, and lymphomas. CD71/Transferrin receptor has been reported to be associated with cell proliferation in both normal and neoplastic tissues and useful in predicting clinical behavior or response to therapy in a number of malignancies including breast cancer.

Images



Formalin-fixed, paraffin-embedded Human Placenta stained with CD71 Monoclonal Antibody (TFRC/1818).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.