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Product datasheet for TA392436M

CD71 (TFRC) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:2000~1:5000
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Recombinant protein of human CD71/TfR.
Specificity:	CD71/TfR polyclonal antibody detects endogenous levels of CD71/TfR protein.
Formulation:	Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2.
Concentration:	1mg/ml
Conjugation:	Unconjugated
Storage:	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.
Stability:	1 year
Predicted Protein Size:	~ 90 kDa
Gene Name:	transferrin receptor
Database Link:	Entrez Gene 7037 Human P02786

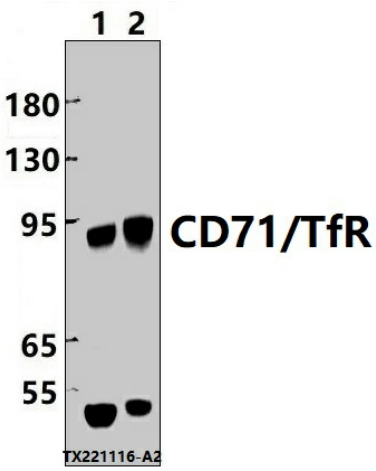
View online »

Background: Transferrin receptor 1 (CD71, TFRC) is a type II transmembrane receptor and carrier protein responsible for the uptake of cellular iron through receptor-mediated endocytosis. Neutral pH at the cell surface promotes binding of the iron-binding glycoprotein transferrin (Tf) to the CD71 receptor. The receptor-ligand complex enters the cell through receptor-mediated endocytosis and is internalized into an endosome. Relatively lower endosomal pH leads to a change in the local charge environment surrounding the iron-transferrin binding site and results in the release of iron. The receptor-ligand complex is recycled to the cell surface where transferrin dissociates from the CD71 receptor. Ubiquitously expressed transferrin receptor is continuously recycled and undergoes clathrin-mediated endocytosis regardless of ligand binding state. The interaction between receptor and ligand has been studied in detail. The helical domain of CD71 directly interacts with the transferrin C-lobe and induces a conformation change in Tf to facilitate the transport process. Interaction between the receptor CD71 and transferrin is mediated by the membrane protein hemochromatosis (HFE). HFE binds the α-helical domain of CD71, blocking formation of the CD71-transferrin complex and inhibiting iron uptake. In addition to binding transferrin, CD71 also interacts with H-ferritin at the cell surface and transports this intracellular iron storage protein to cellular endosomes and lysosomes. Additional studies indicate that the transferrin receptor is an evolutionarily conserved receptor for a number of arenaviruses and at least one retrovirus. Aberrant expression of CD71 is seen in a number of cancers, including thyroid carcinomas, lymphomas, and T-lineage leukemias, suggesting a possible therapeutic role for targeted inhibition of the transferrin receptor.

Synonyms: CD_antigen: CD71; p90; sTfR; T9; TfR; TfR1; TFRC; TR; Transferrin receptor protein 1; Transferrin receptor protein 1, serum form; Trfr

Note: For research use only, not for use in diagnostic procedure.

Product images:



Western blot (WB) analysis of CD71/TfR polyclonal antibody at 1:2000 dilution Lane1:A549 whole cell lysate(30ug) Lane2:L02 whole cell lysate(30ug)