

## **KD-Validated Anti-Transferrin Receptor Rabbit Monoclonal Antibody**

Rabbit monoclonal antibody Catalog # AGI2275

### **Specification**

# **KD-Validated Anti-Transferrin Receptor Rabbit Monoclonal Antibody - Product Information**

Application WB
Primary Accession P02786
Reactivity Human
Clonality Monoclonal
Isotype Rabbit IgG

Calculated MW Predicted, 85 kDa; observed, 70-85 kDa

KDa

Gene Name TFRC

Aliases TFRC; Transferrin Receptor; P90; CD71;

TFR1; Transferrin Receptor Protein 1; T9; TR; Transferrin Receptor (P90, CD71); CD71 Antigen; IMD46; TRFR; TfR1; Trfr;

TFR; TfR

Immunogen Recombinant protein of human TFRC

## KD-Validated Anti-Transferrin Receptor 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

## KD-Validated Anti-Transferrin Receptor Rabbit Monoclonal Antibody - Protein Information

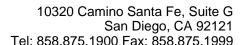
## **Name TFRC**

#### **Function**

Cellular uptake of iron occurs via receptor-mediated endocytosis of ligand-occupied transferrin receptor into specialized endosomes (PubMed:<a

href="http://www.uniprot.org/citations/26214738" target="\_blank">26214738</a>). 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:<a

 $href="http://www.uniprot.org/citations/26642240" target="\_blank">26642240</a>). Acts as a lipid sensor that regulates mitochondrial fusion by regulating activation of the JNK pathway (PubMed:<a href="http://www.uniprot.org/citations/26214738" target="_blank">26214738</a>).$ 





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:<a href="http://www.uniprot.org/citations/26214738" target="\_blank">26214738</a>). 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:<a href="http://www.uniprot.org/citations/26214738" target="\_blank">26214738</a>). Mediates uptake of NICOL1 into fibroblasts where it may regulate extracellular matrix production (By similarity).

## **Cellular Location**

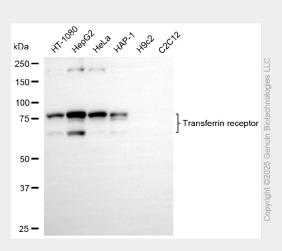
Cell membrane; Single-pass type II membrane protein Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

## KD-Validated Anti-Transferrin Receptor Rabbit Monoclonal Antibody - Protocols

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

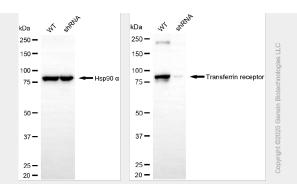
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## KD-Validated Anti-Transferrin Receptor Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-transferrin receptor antibody (Cat#AGI2275). Total cell lysates (20  $\mu$ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-transferrin receptor antibody (Cat#AGI2275, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.





Western blotting analysis using anti-transferrin receptor antibody (Cat#AGI2275). Transferrin receptor expression in wild-type (WT) and transferrin receptor (TFRC) shRNA knockdown (KD) HeLa cells with 20  $\mu g$  of total cell lysates. Hsp90  $\alpha$  serves as a loading control. The blot was incubated with anti-transferrin receptor antibody (Cat#AGI2275, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.