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

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: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).

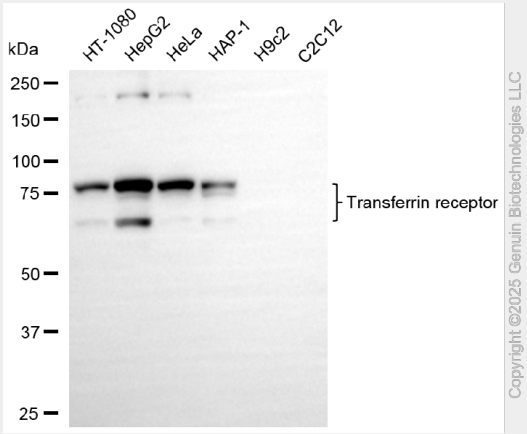
Cellular Location
Cell membrane; Single-pass type II membrane protein Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

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

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

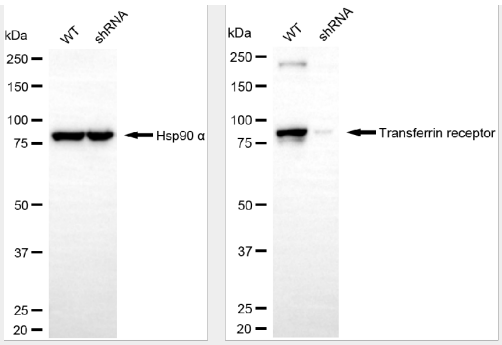
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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



Western blotting analysis using anti-transferrin receptor antibody (Cat#AGI2275). Total cell lysates (20 µg) 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.

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



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 µg of total cell lysates. Hsp90 α 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.