10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

CD71 / Transferrin Receptor Antibody
Rabbit Polyclonal Antibody
Catalog # ALS13248

Specification

CD71 / Transferrin Receptor Antibody - Product Information

Application	**WB**
Primary Accession	P02786
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**85kDa KDa**

CD71 / Transferrin Receptor 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
Human and mouse CD71. Predicted cross-reactivity based on amino acid sequence homology: cat (86%), dogs (81%), pig (82%).

Reconstitution & Storage
Aliquot and store at -20°C. Minimize freezing and thawing.

Precautions
CD71 / Transferrin Receptor Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CD71 / Transferrin Receptor 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 heditary 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:<a

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

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

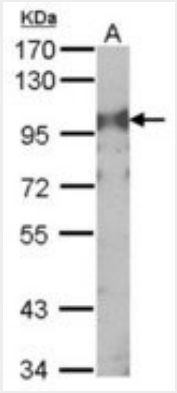
Volume
50 µl

CD71 / Transferrin Receptor 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

CD71 / Transferrin Receptor Antibody - Images



Sample (30 ug of whole cell lysate).

CD71 / Transferrin Receptor 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 heditary hemochromatosis protein HFE, competes for binding with transferrin for an overlapping C-terminal binding site.

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CD71 / Transferrin Receptor Antibody - References

Schneider C.,et al.Nature 311:675-678(1984).
McClelland A.,et al.Cell 39:267-274(1984).
Evans P.,et al.Gene 199:123-131(1997).
Wheeler D.L.,et al.Thesis (1999), University of Iowa, United States.
Totoki Y.,et al.Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.