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# CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide

**Mouse Monoclonal Antibody [Clone TFRC/1059 ]**
**Catalog # AH12385**

## Specification

### CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide - Product Information

| | |
|---|---|
| Application | **,3,4,** |
| Primary Accession | P02786 |
| Other Accession | 7037, 529618 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **Mouse / IgG1, kappa** |
| Calculated MW | **85-95kDa (monomer); 190kDa (dimer) KDa** |

### CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide - 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

**Storage**
Store at 2 to 8°C.Antibody is stable for 24 months.

**Precautions**
CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

### CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide - 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 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:<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>).

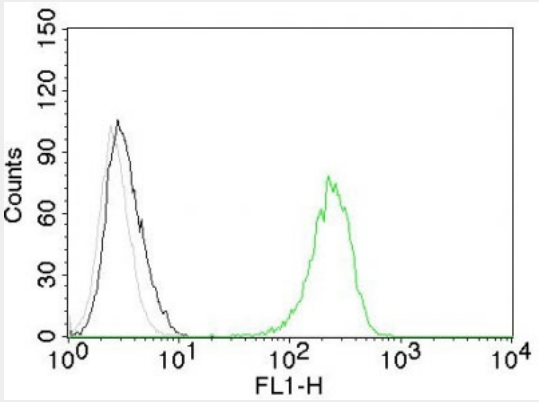
**Cellular Location**
Cell membrane; Single-pass type II membrane protein Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

## CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide - 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 (TFRC) Antibody - With BSA and Azide - Images




Flow Cytometry of human CD71 on Jurkat Cells. Black: Cells alone; Grey: Isotype Control; Green: AF488-labeled CD71 Monoclonal Antibody (TFRC/1059).

## CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide - 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. Its epitope is localized in the extracellular domain of CD71. 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.

## CD71 / Transferrin Receptor (TFRC) Antibody - With BSA and Azide - References

Van de Rijna M, Geurts van Kessel AHM, Kroezen V, van Agthoven AJ, Verstijnen K, Terhorst C, Hilgers J: Cytogenet Cell Genet 1983;36:525-531. | Oudermans et al. Cancer, 1986; 58:1252. | K. Moolenaar et al. Cancer research 50,1102-1106, 1990