# CD71 / Transferrin Receptor (TFRC) Antibody

Mouse Monoclonal Antibody [Clone TFRC/3541]

| Catalog No | Format | Size |
|---|---|---|
| 7037-MSM11-P0 | Purified Ab with BSA and Azide at 200ug/ml | 20 ug |
| 7037-MSM11-P1 | Purified Ab with BSA and Azide at 200ug/ml | 100 ug |
| 7037-MSM11-P1ABX | Purified Ab WITHOUT BSA or Azide at 1.0mg/ml | 100 ug |

| Applications | Tested Dillution | Note |
|---|---|---|
| Immunohistochemistry (IHC) | 1-2ug/ml | 30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes |

## Product Details

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|---|---|
| **Clone** | TFRC/3541 |
| **Immunogen** | Recombinant human TFRC protein |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype / Light Chain** | IgG2 / Kappa |
| **Mol. Weight of Antigen** | 84.87kDa |
| **Cellular Localization** | Cell membrane, Melanosome, Secreted |
| **Species Reactivity** | Human |

**Optimal dilution for a specific application should be determined.*

## Product Images for CD71 / Transferrin Receptor (TFRC) Antibody

### Specificity & Comments

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)., (Microbial infection) Acts as a receptor for new-world arenaviruses: Guanarito, Junin and Machupo virus., (Microbial infection) Acts as a host entry factor for rabies virus that hijacks the endocytosis of TFRC to enter cells., (Microbial infection) Acts as a host entry factor for SARS-CoV, MERS-CoV and SARS-CoV-2 viruses that hijack the endocytosis of TFRC to enter cells.

### Supplied As

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

### Storage and Stability

Antibody with azide - store at 2 to 8 °C. Antibody without azide - store at -20 to -80 °C. Antibody is stable for 24 months. Non-hazardous. No MSDS required.

### Limitations and Warranty

This antibody is available for research use only and is not approved for use in diagnosis.There are no warranties, expressed or implied, which extend beyond this description. Company is not liable for any personal injury or economic loss resulting from this product.