

Monoclonal Antibody to CD71 / TfR1 - FITC

Alternate names: TfR1, Transferrin receptor protein 1, p90

Catalog No.: AM00702FC-N

Quantity: 0.5 mg

Concentration: 0.5 mg/ml (OD280nm)

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). Useful in studies of dividing haematopoietic and tumour cell populations, and metabolic activity. A second ligand, the hereditary hemochromatosis protein HFE, competes for binding with transferrin for an overlapping C terminal binding site. The antigen is present on most dividing cells, including normally cycling in vivo hematopoietic progenitor cells, mitogenically stimulated cells in vitro, some primary tumor cells and most proliferating cells in vitro.

The transferrin receptor has been structurally characterized as a sulfide bound dimer of identical glycoprotein subunits of 95 kDa. The transferrin receptor is not present on resting blood lymphocytes. On PBL, the receptor appears after activation. The expression of transferrin receptor is coordinately regulated with cell growth. Present on T and B cell lines. The soluble (or serum) transferrin receptor (sTfR) is a circulating truncated form of the membrane receptor protein; it is an 85 kDa glycoprotein forming in serum a 320 kDa complex with diferric transferrin. The most important clinical use of the sTfR determination is in the differential diagnosis between iron deficiency anaemia and the anaemia of chronic disease.

Uniprot ID: [Q62351](#)

NCBI: [NP_035768.1](#)

GeneID: [22042](#)

Host / Isotype: Rat / IgG2a

Clone: R17217.1.4

Format: **State:** Liquid purified Ig fraction
Purification: Protein G Chromatography
Buffer System: 0.01M PBS, pH 7.4 containing 1% BSA and 0.09% Sodium azide as preservative
Label: FITC

Applications: **Flow Cytometry:** 1 µg to stain 1.0 x 10⁶ cells.
Immunoprecipitation.

For research and in vitro use only. Not for diagnostic or therapeutic work.
Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com

Immunohistochemistry.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

Recognizes the Mouse Transferrin Receptor protein on the surface of most dividing cells. Suitable for subset analysis of the developmental stage of mouse cells and as a proliferation marker.

Species: Mouse.

Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C.

DO NOT FREEZE!

Centrifuge vial before opening.

This product is photosensitive and should be protected from light.

Shelf life: one year from despatch.

General Readings:

1. Lesley, J., et al., (1982), Immunogenetics, 15:313.
2. Lesley, J., et al., (1984), Mol. Cell. Biol., 4(9): 1675.
3. Kemp, J.D., et al., (1987), J. Immunol., 138:2422.
4. Kemp, J.D., et al., (1989), Cell Immunol., 122:218.

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com