

Product Information

Anti- TFRC

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200398**

Product Description

Anti- TFRC is produced in rabbit using as immunogen a synthetic peptide corresponding to an internal sequence of human TFRC (GenID: 7037), conjugated to KLH. The corresponding sequence is identical in bovine, canine and monkey and differs by a single amino acid in rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti- TFRC recognizes human, rat and mouse TFRC. The antibody may be used in several immunochemical techniques including immunoblotting (~90 kDa) and immunofluorescence. Detection of the TFRC band by immunoblotting is specifically inhibited by the immunizing peptide. An additional band of ~55 kDa may appear in some cell extract preparations.

Transferrin receptor (TFRC), also known as p90, CD71, TFR and TFR1, is a transmembrane glycoprotein which mediates cellular iron uptake. It is composed of two disulphide-bonded sub-units, contains three N-linked glycan units and is post-translationally modified with phosphate and fatty acyl groups. TFRC binds iron-bound transferrin on the cell surface, and the receptor-ligand complex undergoes endocytosis via clathrin-coated pits. Endosomal acidification leads to iron release, which is transported to the cytosol or to the mitochondria in erythroid cells. The apotransferrin-receptor complex is then recycled to the cell surface, where the affinity of apotransferrin for TFRC drops, resulting in its dissociation. TFRC is necessary for development of erythrocytes and the nervous system.¹⁻³

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2.5-5.0 µg/mL is recommended using whole extracts of human U-2-OS and mouse Neuro-2a cells.

Immunofluorescence: a working concentration of 10-20 µg/mL is recommended using rat NRK cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Wang, J., and Pantopoulos, K., *Biochem. J.*, **434**, 365-381 (2011).
2. Schneider, C., et al., *Nature*, **311**, 675-678 (1984).
3. Jing, S., and Trowbridge, I.S., *EMBO J.*, **6**, 327-331 (1987).

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