EXBIO Antibodies

PRODUCT DATA SHEET

12-258-C100

Monoclonal Antibody to Transferrin Low Endotoxin (0.1 mg)

Clone:	HTF-14
Isotype:	Mouse IgG1
Specificity:	The antibody HTF-14 recognizes an epitope located in the N-terminal domain of human serum transferrin, a 77 kDa single polypeptide chain glycoprotein (member of the iron binding family of proteins). It is synthesised in the liver and consists of two domains each having a high affinity reversible binding site for Fe3+.
Regulatory Status:	RUO
Immunogen:	Purified porcine transferrin.
Species Reactivity:	Human, Porcine, Rabbit
Negative Species:	Bovine, Sheep, Canine (Dog), Equine (Horse), Other not tested
Application:	Western Blotting Application note: non-reducing conditions Immunohistochemistry (paraffin sections) Recommended dilution: 10 µg/ml Positive tissue: placenta Immunocytochemistry ELISA RIA Functional Application The antibody HTF-14 blocks binding of transferrin to the receptor.
Purity:	> 95% (by SDS-PAGE)
Purification:	Purified from ascites by precipitation methods and ion exchange chromatography.
Concentration:	1 mg/ml
Storage Buffer:	Azide free phosphate buffered saline (PBS), approx. pH 7.4; 0.2 µm filter sterilized. Endotoxin level is less than 0.01 EU/µg of the protein, as determined by the LAL test.
Storage / Stability:	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
Expiration:	See vial label
Lot Number:	See vial label

For laboratory research only, not for drug, diagnostic or other use.

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Background:

Transferrin is a monomeric glycoprotein of approximately 77 kDa, which serves as an iron-transporter. In normal plasma, transferrin has a concentration of 25-50 µmol / liter, and is usually about one-third saturated with iron, thus providing a large buffering capacity in case of an acute increase in plasma iron levels. Cells take up transferrin-iron complexes (holotransferrin) using transferrin receptor dimers. Upon binding of holotransferrin, the receptor is internalized by clathrin-mediated endocytosis. Acidification of endosomes by vesicular membrane proton pumps leads to dissociation of iron ions, whereas transferrin (apotransferrin) remains associated with its receptor (CD71) and recycles to the cell surface, where apotransferrin is released upon exposure to normal pH. Internalization of labeled transferrin thus represents an usefull approach to study endocytosis. Serum concentration rises in iron deficiency and pregnancy and falls in iron overload, infection and inflammatory conditions. Iron/transferrin complex is essential in haemoglobin synthesis and for certain types of cell division.

References:

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