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30-1603: Low Endotoxin Anti-Transferrin Monoclonal Antibody (Clone:HTF-14)

Clonality :	Monoclonal
Clone Name :	HTF-14
Application :	WB
Reactivity :	Human
Gene :	TFRC
Gene ID :	7037
Uniprot ID :	P02786
Format :	Low Endotoxin
Alternative Name :	TFRC
Isotype :	Mouse IgG1
Immunogen Information :	Purified porcine transferrin.

Description

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.

Product Info

Amount :	0.1 mg
Purification :	Purified by precipitation and chromatography
Storage condition :	Store at 2-8°C. Do not freeze.

Application Note

Functional application: The antibody HTF-14 blocks binding of transferrin to its receptor.
Immunohistochemistry (paraffin sections): Recommended dilution: 10 µg/ml; positive tissue: placenta.
Western blotting: non-reducing conditions, recommended dilution: 1-2 µg/ml.

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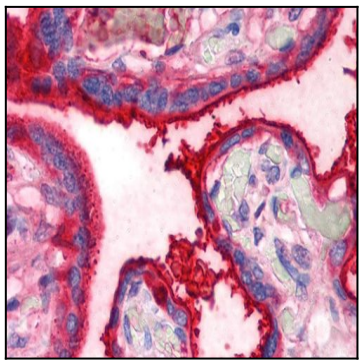

Figure-1: Immunohistochemistry staining of human placenta (paraffin sections) using anti-transferrin (HTF-14).

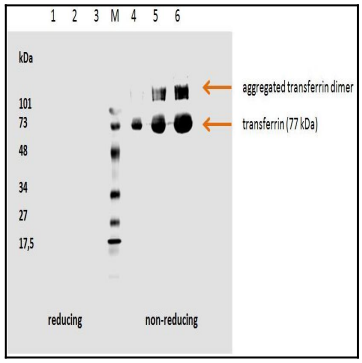

Figure-2: Western blotting detection of human transferrin by mouse monoclonal antibody HTF-14. 1. hTransferrin; 5 µg/well (red. con.) 2. hTransferrin; 3 µg/well (red. con.) 3. hTransferrin; 1 µg/well (red. con.) M. Low Range marker (Bio-Rad) 4. hTransferrin; 1 µg/well (non-red. con.) 5. hTransferrin; 3 µg/well (non-red. con.) 6. hTransferrin; 5 µg/well (non-red. con.)