

ARG22938 anti-CD71 / Transferrin Receptor antibody [OX-26] (PE)

Package: 50 tests
Store at: 4°C

Summary

Product Description	PE-conjugated Mouse Monoclonal antibody [OX-26] recognizes CD71 / Transferrin Receptor Mouse anti Rat CD71 antibody, clone OX-26 recognizes rat CD71, also known as transferrin receptor, a homodimeric type II transmembrane protein, expressed by all proliferating cells and cells with a requirement for iron, including reticulocytes and capillary endothelium in brain. Clone OX-26 also binds to a number of non-dividing normal tissues. The balance between a sufficient amount of iron uptake and prevention of accumulation of excess iron within a cell, is vitally important to maintain cellular functions such as oxygen and electron transport and mitochondrial energy metabolism, whilst preventing permanent cell and tissue damage. Transferrin receptor (CD71), transferrin and ferritin have been identified as specialised proteins which control the uptake, transport and storage of free iron in tissues, thereby maintaining iron homeostasis (Cripton et al. 1992). An imbalance in iron homeostasis within the brain has been linked with the neurodegenerative diseases, Alzheimer's, Parkinson's, Huntington's and Multiple Sclerosis (Benarroch 2009). Mouse anti rat CD71 clone OX-26 is reported as suitable for use in immunoelectron microscopy (Lipardi et al. 2002). OX-26 detects a band of ~95kDa in Western blotting under reducing conditions and ~195 kDa under non-reducing conditions reflecting its homodimeric structure.
Tested Reactivity	Rat
Tested Application	FACS
Host	Mouse
Clonality	Monoclonal
Clone	OX-26
Isotype	IgG2a
Target Name	CD71 / Transferrin Receptor
Species	Rat
Immunogen	PHA activated Rat lymphocytes.
Conjugation	PE
Alternate Names	TFR1; CD antigen CD71; CD71; T9; p90; TR; Trfr; Transferrin receptor protein 1; TRFR; sTfR; TfR1; TfR; TFR

Application Instructions

Application table	<table> <tr> <th>Application</th><th>Dilution</th></tr> <tr> <td>FACS</td><td>Neat</td></tr> </table>	Application	Dilution	FACS	Neat
Application	Dilution				
FACS	Neat				
Application Note	<p>FACS: Use 10 µl of the suggested working dilution to label 10⁶ cells in 100 µl.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p>				

Properties

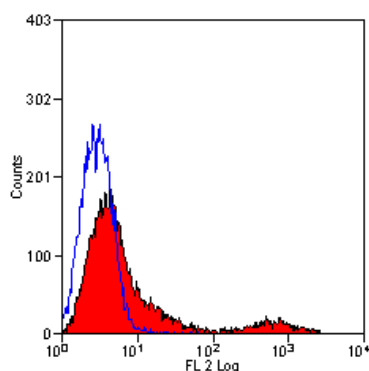
Form	Liquid
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Purification	Purification with Protein A.
Buffer	PBS, 0.09% Sodium azide, 1% BSA and 5% Sucrose
Preservative	0.09% Sodium azide
Stabilizer	1% BSA and 5% Sucrose
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	Tfrc
Gene Full Name	transferrin receptor
Background	This gene encodes a cell surface receptor necessary for cellular iron uptake by the process of receptor-mediated endocytosis. This receptor is required for erythropoiesis and neurologic development. Multiple alternatively spliced variants have been identified. [provided by RefSeq, Sep 2015]
Function	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). A second ligand, the hereditary hemochromatosis protein HFE, competes for binding with transferrin for an overlapping C-terminal binding site. [UniProt]
Calculated Mw	85 kDa
PTM	N- and O-glycosylated, phosphorylated and palmitoylated. The serum form is only glycosylated. Proteolytically cleaved on Arg-100 to produce the soluble serum form (sTfR). Palmitoylated on both Cys-62 and Cys-67. Cys-62 seems to be the major site of palmitoylation.

Images



ARG22938 anti-CD71 / Transferrin Receptor antibody [OX-26] (PE)
FACS image

Flow Cytometry: Rat spleen cells stained with ARG22938 anti-CD71 / Transferrin Receptor antibody [OX-26] (PE).