

Datasheet: MCA155G

BATCH NUMBER 0515

Description:	MOUSE ANTI RAT CD71
Specificity:	CD71
Other names:	TRANSFERRIN RECEPTOR
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	OX-26
Isotype:	IgG2a
Quantity:	1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/50 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			
Western Blotting	▪			
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Rat
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide

Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1 mg/ml
Immunogen	PHA activated rat lymphocytes.
External Database Links	<p>UniProt: Q99376 Related reagents</p> <p>Entrez Gene: 64678 Tfr Related reagents</p>
Synonyms	Tfr
RRID	AB_2201358
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells from the NS1 mouse myeloma cell line.
Specificity	<p>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.</p> <p>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 (Crihton <i>et al.</i> 1992).</p> <p>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).</p> <p>Mouse anti rat CD71 clone OX-26 is reported as suitable for use in immunoelectron microscopy (Lipardi <i>et al.</i> 2002). OX-26 detects a band of ~95kDa in Western blotting under reducing conditions and ~195 kDa under non-reducing conditions reflecting it's homodimeric structure.</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> 1. Jefferies, W.A. <i>et al.</i> (1985) Analysis of lymphopoietic stem cells with a monoclonal antibody to the rat transferrin receptor. Immunology. 54 (2): 333-41. 2. Yefimova, M.G. <i>et al.</i> (2002) Impaired retinal iron homeostasis associated with defective phagocytosis in Royal College of Surgeons rats. Invest Ophthalmol Vis Sci. 43 (2):

[537-45.](#)

3. Jefferies, W.A. *et al.* (1984) Transferrin receptor on endothelium of brain capillaries. [Nature. 312 \(5990\): 162-3.](#)
4. Lipardi, C. *et al.* (2002) Differential recognition of a tyrosine-dependent signal in the basolateral and endocytic pathways of thyroid epithelial cells. [Endocrinology. 143 \(4\): 1291-301.](#)
5. Stevenson, K.S. *et al.* (2009) Isolation, characterization, and differentiation of thy1.1-sorted pancreatic adult progenitor cell populations. [Stem Cells Dev. 18 \(10\): 1389-98.](#)
6. Jung, S.H. *et al.* (2008) Plantaris muscle of aged rats demonstrates iron accumulation and altered expression of iron regulation proteins. [Exp Physiol. 93: 407-14.](#)
7. Chen, X. *et al.* (2000) Oxidative damage in an esophageal adenocarcinoma model with rats. [Carcinogenesis. 21: 257-63.](#)
8. Huang, E. *et al.* (2009) Characterization of rat hair follicle stem cells selected by vario magnetic activated cell sorting system. [Acta Histochem Cytochem. 42: 129-36.](#)
9. Petrusca, D.N. *et al.* (2010) Sphingolipid-mediated inhibition of apoptotic cell clearance by alveolar macrophages. [J Biol Chem. 285: 40322-32.](#)
10. Wu, Y.J. *et al.* (2007) *In vivo* leukocyte labeling with intravenous ferumoxides/protamine sulfate complex and *in vitro* characterization for cellular magnetic resonance imaging. [Am J Physiol Cell Physiol. 293: C1698-708.](#)
11. De Luca, M.A. *et al.* (2015) Lactoferrin- and antitransferrin-modified liposomes for brain targeting of the NK3 receptor agonist senktide: Preparation and *in vivo* evaluation. [Int J Pharm. 479: 129-137.](#)
12. Gosk, S. *et al.* (2004) Targeting anti-transferrin receptor antibody (OX26) and OX26-conjugated liposomes to brain capillary endothelial cells using *in situ* perfusion. [J Cereb Blood Flow Metab. 24: 1193-204.](#)
13. Pang, Z. (2008) Preparation and brain delivery property of biodegradable polymersomes conjugated with OX26. [J Control Release. 128: 120-7.](#)
14. Moos, T, Morgan, E.H. (2001) Restricted transport of anti-transferrin receptor antibody (OX26) through the blood-brain barrier in the rat. [J Neurochem. 79: 119-29.](#)
15. Moos, T. *et al.* (2003) Delivery of transferrin and immunoglobulins to the ventricular system of the rat. [Front Biosci. 8: a102-9.](#)
16. Fabriek, B.O. *et al.* (2007) The macrophage CD163 surface glycoprotein is an erythroblast adhesion receptor. [Blood. 109: 5223-9.](#)
17. Rathnasamy, G. *et al.* (2011) Iron and Iron Regulatory Proteins in Amoeboid Microglial Cells Are Linked to Oligodendrocyte Death in Hypoxic Neonatal Rat Periventricular White Matter through Production of Proinflammatory Cytokines and Reactive Oxygen/Nitrogen Species [J. Neurosci 31: 17982-95.](#)
18. Loureiro, J.A. *et al.* (2016) Cellular uptake of PLGA nanoparticles targeted with anti-amyloid and anti-transferrin receptor antibodies for Alzheimer's disease treatment [Colloids and Surfaces B: Biointerfaces Apr 20 \[Epub ahead of print\]](#)
19. Loureiro, J.A. *et al.* (2015) Dual ligand immunoliposomes for drug delivery to the brain. [Colloids Surf B Biointerfaces. 134: 213-9.](#)
20. Picard, E. *et al.* (2015) Targeting iron-mediated retinal degeneration by local delivery of transferrin. [Free Radic Biol Med. 89: 1105-21.](#)
21. Ashrafzadeh, M.S. *et al.* (2020) *In vivo* Glioblastoma Therapy Using Targeted Liposomal Cisplatin. [Int J Nanomedicine. 15: 7035-49.](#)

Storage Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10040 available at:
<https://www.bio-rad-antibodies.com/SDS/MCA155G>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) [HRP](#)
Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@550](#),
[DyLight@650](#), [DyLight@680](#), [DyLight@800](#),
[FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA1210\)](#)

North & South America Tel: +1 800 265 7376

Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)
'M365448:200529'

Printed on 25 Mar 2023

© 2023 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)