Datasheet: MCA2474EL

BATCH NUMBER 156723

Description:	RAT ANTI MOUSE CD71:Low Endotoxin
Specificity:	CD71
Other names:	TRANSFERRIN RECEPTOR
Format:	Low Endotoxin
Product Type:	Monoclonal Antibody
Clone:	8D3
Isotype:	IgG2a
Quantity:	0.5 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	▪			1/100 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Functional Assays	▪			

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	Mouse
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	None present

Stabilisers	
Carrier Free	Yes
Endotoxin Level	< 0.01 EU/ug
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Mouse transformed endothelioma cell line t.end1.
External Database Links	**UniProt:** Q62351 Related reagents **Entrez Gene:** 22042 Tfrc Related reagents
Synonyms	Trfr
RRID	AB_915205
Fusion Partners	Spleen cells from immunised Lewis rats were fused with the cells of the mouse NS0 myeloma cell line.
Specificity	**Rat anti Mouse CD71 antibody, clone 8D3** recognizes mouse CD71, a 763 amino acid ~95 kDa single pass type II cell surface transmembrane glycoprotein, otherwise known as the transferrin receptor. CD71 is a major iron-binding protein, which plays a key role in the transport of iron into cells that require it. In mice, CD71 is widely expressed on a variety of cells, including Sertoli cells and cells which form the blood brain barrier (BBB) in the central nervous system. Rat anti Mouse CD71 antibody, clone 8D3 recognizes native, soluble and denatured forms of murine CD71. Binding of the 8D3 antibody to CD71 does not inhibit the proliferation of cell lines tested, and does not interfere with the uptake of iron into cells. Rat anti Mouse CD71 antibody, clone 8D3 has been used as a BBB transporter vector in mice and is suitable for studying CD71 expression, and iron uptake into different tissues, in the mouse (Kissel *et al.* 1988).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6
References	1. Kissel, K. *et al*. (1998) Immunohistochemical localization of the murine transferrin receptor (TfR) on blood-tissue barriers using a novel anti-TfR monoclonal antibody. Histochem cell Biol. 110: 63-72. 2. Lee, H.J. *et al.* (2000) Targeting rat anti-mouse transferrin receptor monoclonal antibodies through blood-brain barrier in mouse. J Pharmacol Exp Ther. 292 (3): 1048-52. 3. Zhang, Y. *et al.* (2004) Intravenous RNA interference gene therapy targeting the human epidermal growth factor receptor prolongs survival in intracranial brain cancer. Clin Cancer

Res. 10 (11): 3667-77.
4. Cabezón I *et al.* (2015) Trafficking of Gold Nanoparticles Coated with the 8D3 Anti-Transferrin Receptor Antibody at the Mouse Blood-Brain Barrier. Mol Pharm. 12 (11): 4137-45.
5. Lee, H.J. *et al.* (2002) Imaging gene expression in the brain *in vivo* in a transgenic mouse model of Huntington's disease with an antisense radiopharmaceutical and drug-targeting technology. J Nucl Med. 43 (7): 948-56.
6. Manich, G. *et al.* (2013) Study of the transcytosis of an anti-transferrin receptor antibody with a Fab' cargo across the blood-brain barrier in mice. Eur J Pharm Sci. 49 (4): 556-64.
7. Sehlin, D. *et al.* (2016) Antibody-based PET imaging of amyloid beta in mouse models of Alzheimer's disease. Nat Commun. 7: 10759.
8. Sehlin, D. *et al.* (2017) Pharmacokinetics, biodistribution and brain retention of a bispecific antibody-based PET radioligand for imaging of amyloid-β. Sci Rep. 7 (1): 17254.

Further Reading

1. Jones AR & Shusta EV (2007) Blood-brain barrier transport of therapeutics via receptor-mediation. Pharm Res. 24 (9): 1759-71.
2. Pardridge WM (2007) Blood-brain barrier delivery of protein and non-viral gene therapeutics with molecular Trojan horses. J Control Release. 122 (3): 345-8.
3. Boado RJ *et al.* (2009) Engineering and expression of a chimeric transferrin receptor monoclonal antibody for blood-brain barrier delivery in the mouse. Biotechnol Bioeng. 102 (4): 1251-8.

Storage

Store at -20^{o}C only.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. 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 #10162 available at:
https://www.bio-rad-antibodies.com/SDS/MCA2474EL
10162

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®550, DyLight®650, DyLight®800

Goat Anti Rat IgG (STAR131...) Alk. Phos., Biotin

Recommended Negative Controls

RAT IgG2a NEGATIVE CONTROL:Low Endotoxin (MCA1212EL)

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

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