

PRODUCT INFORMATION



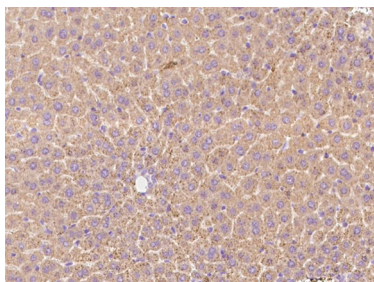
Transferrin Receptor Protein 1/CD71 (mouse) Rabbit Monoclonal Antibody (Clone 049)

Item No. 37079

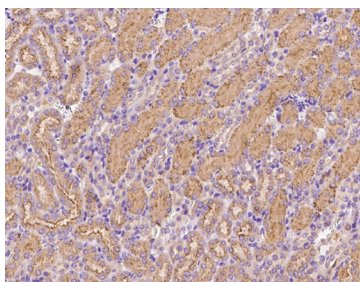
Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Cluster of Differentiation 71, p90, TfR1, TFRC, Transferrin Receptor Protein 1
Immunogen:	Recombinant mouse TfR1
Cross Reactivity:	(+) TfR1
Species Reactivity:	(+) Mouse
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	049
Host:	Rabbit
Isotype:	IgG
Application:	Immunohistochemistry; the recommended starting dilution is 1:100-1:500. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

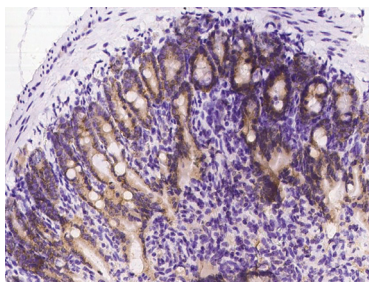
Images



Immunohistochemical staining of formalin-fixed and paraffin embedded mouse liver with Transferrin Receptor Protein 1/CD71 (mouse) Rabbit Monoclonal Antibody (Clone 049) at 1:200 dilution.



Immunohistochemical staining of formalin-fixed and paraffin embedded mouse kidney with Transferrin Receptor Protein 1/CD71 (mouse) Rabbit Monoclonal Antibody (Clone 049) at 1:200 dilution.



Immunohistochemical staining of formalin-fixed and paraffin embedded mouse small intestine with Transferrin Receptor Protein 1/CD71 (mouse) Rabbit Monoclonal Antibody (Clone 049) at 1:200 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/06/2022

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Transferrin receptor (TfR1), also known as CD71, is a homodimeric transmembrane receptor for transferrin (Item No. 32030) that facilitates iron delivery into cells and is encoded by *TFRC* in humans.¹ It is composed of two TfR1 monomers, each containing a cytoplasmic tail, an internalization motif, a membrane-spanning portion, and a stalk region that covalently links the monomers. An extracellular ectodomain binds transferrin and drives TfR1 dimerization.^{1,2} TfR1 is ubiquitously expressed, except on mature red blood cells and certain terminally differentiated cells, with the highest expression on immature erythroid cells and in the placenta, and is involved in erythropoiesis, lymphocyte development, and hematopoietic expansion in the bone marrow.^{3,4} TfR1/transferrin-mediated iron transport contributes to the intracellular iron pool required for ferroptosis and an anti-TfR1 antibody has been used in combination with anti-malondialdehyde antibodies to identify ferroptotic cells *in vitro* and human cancer tissue in a mouse xenograft model.⁵ *TFRC* is overexpressed in various breast cancer tumors and gliomas and positively correlated with poor prognosis.⁶ Cayman's Transferrin Receptor Protein 1/CD71 (mouse) Rabbit Monoclonal Antibody (Clone 049) can be used for immunohistochemistry (IHC).

References

1. Luck, A.N. and Mason, A.B. Transferrin-mediated cellular iron delivery. *Curr. Top. Membr.* **69**, 3-35 (2012).
2. Gammella, E., Buratti, P., Cairo, G., *et al.* The transferrin receptor: The cellular iron gate. *Metallomics* **9**(10), 1367-1375 (2017).
3. Ponka, P. and Lok, C.N. The transferrin receptor: Role in health and disease. *Int. J. Biochem. Cell Biol.* **31**(10), 1111-1137 (1999).
4. Wang, S., He, X., Wu, Q., *et al.* Transferrin receptor 1-mediated iron uptake plays an essential role in hematopoiesis. *Haematologica* **105**(8), 2071-2082 (2020).
5. Feng, H., Schorpp, K., Jin, J., *et al.* Transferrin receptor is a specific ferroptosis marker. *Cell Rep.* **30**(10), 3411-3423 (2020).
6. Shen, Y., Li, X., Dong, D., *et al.* Transferrin receptor 1 in cancer: A new sight for cancer therapy. *Am. J. Cancer Res.* **8**(6), 916-931 (2018).

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM