ALPHA DIAGNOSTIC INTERNATIONAL

Life Technologies™ Your Molecular & Cell Technology Partner

Product Specification Sheet

Metal Transporter Protein (MTP1/IREG1/Ferroportin, Fpn) Antibodies

Cat. # MTP11-P	Mouse MTP1 Control Peptide # 1	**SIZE**: 100 ug
Cat. # MTP11-S	Rabbit Anti-Mouse MTP1 antiserum # 1	**SIZE**: 100 ul
Cat. # MTP11-A	Rabbit Anti-Mouse MTP1 IgG # 1 (aff pure)	**SIZE**: 100 ug

A novel iron-regulated gene that is homologous to the DMAT1, termed **Metal Transporter Protein (MTP1,** human 571 aa, mouse 570 aa; ~90% similarity*)*, has been identified. MTP1 is also described as iron-regulated transporter (**IREG1**), **Ferroportin1, and SLC11A3 iron transporter** or solute carrier family 11 (proton coupled divalent metal ion transporter), Member 3, formerly SLC11A3). MTP1 contains IRE in the 5'-UTR. It is expressed in tissues involved in body iron homeostasis including the developing and mature reticuloendothelial system, the duodenum, and the pregnant uterus. MTP1 is also expressed in muscle and central nervous system cells in the embryo. In the adult mouse, MTP1 expression in the liver and duodenum are reciprocally regulated. Iron deficiency induces MTP1 expression in the duodenum but down-regulates expression in the liver. Therefore, MTP1 appears to be an iron-regulated protein that is involved in iron metabolism.

Source of Antigen and Antibodies

Antigen	19-aa peptide of Mouse MTP1 (gene protein #Q3TJ33 or Q9JHI9 Slc40a1, refs1) ; **Designated (MTP11-P or control peptide)** conjugated to KLH
Location	~C-terminal, cytoplasmic
Ab Host/type	Rabbit, Unpurified antiserum (Cat # MTP11-S) and Polyclonal IgG, purified over antigen-agarose (Cat # MTP11-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage
Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. Affinity purified antibody at 5-20 ug/ml in paraformaldehyde fixed sections of tissues may be tested.

Specificity & Cross-reactivity

The 19 AA mouse MTP11-P control peptide sequence is 100% conserved in mouse ferroprotin1/IREG1, 90% in rat ferroportin 1, and 78% in human, Chimp, and 73% in rabbit MTP1/IREG1/ferroprotein1. Antibody cross-reactivity in various species has not been established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com\data\abblock.html).

General References:

Abboud S (2000) JBC 275; 19906; McKie S et al (2000) Mol. Cell. 5, 299-309; Donovan A et al (2000) 403, 776; CanonneHergaux F et al (1999) Blood 93, 4406 (review);

(2) Citations of ADI's Antibodies for MTP1 (see web site for updated list)

Chen Y, 2005, Neurochemistry International 47, 507-513 WB
Kovar J, 2006, Blood Cells, Molecules, and Diseases, 37, 95-99 WB
Mete A, 2005, Blood Cells, Molecules, Diseases, 34,151-156 WB

*This product is for In vitro research use only.

Related material available from ADI

Antibodies NRAMP1/2, MTP1, Transferrin, and receptor, Ferritin, Defensins 1-4, Hemeoxygenases 1-3

Study **distribution of proteins in kidney and brain** in various discrete regions using pre-made protein blots.

MTP11-S-A-P 70426A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com