

# Product Datasheet

## **NRAMP2/SLC11A2/DMT1 Antibody (4C6) - Azide and BSA Free** **H00004891-M01**

Unit Size: 0.1 mg

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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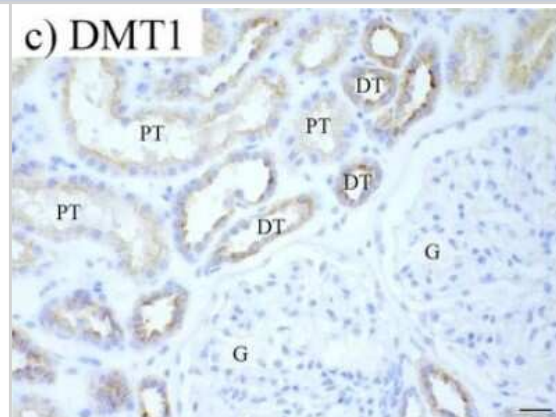
**H00004891-M01****NRAMP2/SLC11A2/DMT1 Antibody (4C6) - Azide and BSA Free**

<b>Product Information</b>	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	4C6
<b>Preservative</b>	No Preservative
<b>Isotype</b>	IgG2a Kappa
<b>Purity</b>	IgG purified
<b>Buffer</b>	In 1x PBS, pH 7.4
<b>Product Description</b>	
<b>Description</b>	Quality control test: Antibody Reactive Against Recombinant Protein.
<b>Host</b>	Mouse
<b>Gene ID</b>	4891
<b>Gene Symbol</b>	SLC11A2
<b>Species</b>	Human, Mouse, Porcine, Bovine
<b>Reactivity Notes</b>	Bovine reactivity reported in scientific literature (PMID: 19820055).
<b>Specificity/Sensitivity</b>	SLC11A2 - solute carrier family 11 (proton-coupled divalent metal ion transporters), member 2
<b>Immunogen</b>	SLC11A2 (NP_000608, 1 a.a. ~ 65 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. MVLGPEQKMSDDSVSGDHGESASLGNINPAYSNPSLSQSPGDSEEYFATYFN EKISIPEEEEYSCF
<b>Notes</b>	This product is produced by and distributed for Abnova, a company based in Taiwan.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
<b>Recommended Dilutions</b>	Western Blot 1:100-1:2000, ELISA, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation, Immunohistochemistry-Paraffin 1:10-1:500
<b>Application Notes</b>	It has been used for IHC-P and ELISA. Use in Immunohistochemistry reported in scientific literature (PMID: 29921869).

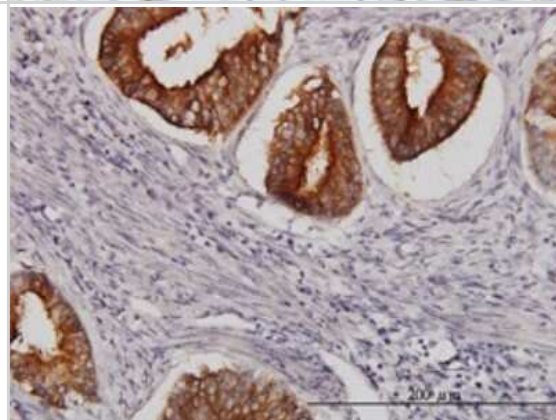


## Images

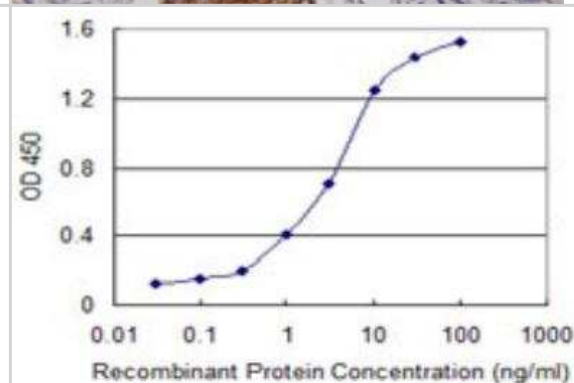
Immunohistochemistry-Paraffin: NRAMP2/SLC11A2/DMT1 Antibody (4C6) [H00004891-M01] - Immunohistochemistry of iron handling proteins in healthy kidney. Representatives images of ZIP8 (a), ZIP14 (b), divalent metal transporter 1 (DMT1; c), L-ferritin (d), H-ferritin (e), and ferroportin (f) staining in healthy kidney. Renal structures indicated as glomerulus (g), proximal tubule (PT), distal tubule (DT). Scale bar 20uM. Image collected and cropped by CiteAb from the following publication ([//www.nature.com/articles/s41598-018-27107-8](https://www.nature.com/articles/s41598-018-27107-8)) licensed under a CC-BY license.



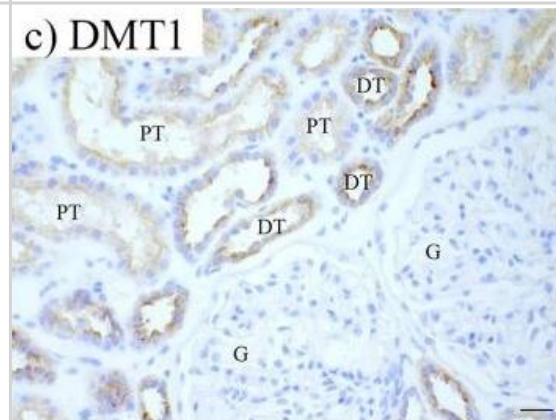
Immunohistochemistry-Paraffin: NRAMP2/SLC11A2/DMT1 Antibody (4C6) [H00004891-M01] - Analysis of monoclonal antibody to SLC11A2 on formalin-fixed paraffin-embedded human endometrium cancer. Antibody concentration 3 ug/ml.



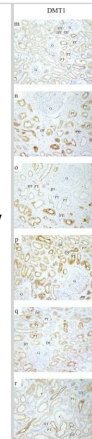
ELISA: NRAMP2/SLC11A2/DMT1 Antibody (4C6) [H00004891-M01] - Detection limit for recombinant GST tagged SLC11A2 is 0.03 ng/ml as a capture antibody.



Immunohistochemistry: NRAMP2/SLC11A2/DMT1 Antibody (4C6) [H00004891-M01] - Immunohistochemistry of iron handling proteins in healthy kidney. Representatives images of ZIP8 (a), ZIP14 (b), divalent metal transporter 1 (DMT1; c), L-ferritin (d), H-ferritin (e), & ferroportin (f) staining in healthy kidney. Renal structures indicated as glomerulus (g), proximal tubule (PT), distal tubule (DT). Scale bar 20 μM. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29921869>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunohistochemistry: NRAMP2/SLC11A2/DMT1 Antibody (4C6) [H00004891-M01] - Immunohistochemistry of putative iron importers in chronic kidney disease. Representative images of ZIP8 (a–f), ZIP14 (g–l), & divalent metal transporter 1 (DMT1; m–r) staining in control (a,g,m), early diabetic nephropathy (DNE; b,h,n), advanced diabetic nephropathy (DNA; c,i,o), focal segmental glomerulosclerosis (FSGS; d,j,p), lupus nephritis (LN; e,k,q) & IgA nephropathy (IgAN; f,l,r). Intensity in proximal & distal tubules quantified (s). Dots represent all quantified images (5 images per biopsy). Renal structures indicated as glomerulus (G), proximal tubule (PT), distal tubule (DT). Scale bar 40  $\mu$ M. \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29921869>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Zhao L, Bartnikas T, Chu X et al. Hyperglycemia promotes microvillus membrane expression of DMT1 in intestinal epithelial cells in a PKCa-dependent manner. *FASEB J.* 2018-11-13 [PMID: 30423260] (WB, Human)

Raaij SV, Swelm RV, Bouman K et al. Tubular iron deposition and iron handling proteins in human healthy kidney and chronic kidney disease *Sci Rep* 2018-06-19 [PMID: 29921869] (IF/IHC, Human)

Ma W, Lu J, Jiang S et al. Maternal protein restriction depresses the duodenal expression of iron transporters and serum iron level in male weaning piglets. *Br J Nutr* 2017-05-23 [PMID: 28534724]

Montalbetti N, Simonin A, Dalghi MG et al. Development and Validation of a Fast and Homogeneous Cell-Based Fluorescence Screening Assay for Divalent Metal Transporter 1 (DMT1/SLC11A2) Using the FLIPR Tetra. *J Biomol Screen.* 2014-02-06 [PMID: 24505080]

Montalbetti N, Simonin A, Simonin C et al. Discovery and characterization of a novel non-competitive inhibitor of the divalent metal transporter DMT1/SLC11A2. *Biochem Pharmacol.* 2015-06-02 [PMID: 26047847]

Hansen SL, Trakooljul N, Liu HC et al. Proteins involved in iron metabolism in beef cattle are affected by copper deficiency in combination with high dietary manganese, but not by copper deficiency alone *J Anim Sci* 2010-01-01 [PMID: 19820055] (WB, Bovine)

Barth S, Edlich F, Berchner-Pfannschmidt U et al. Hypoxia-inducible Factor Prolyl-4-hydroxylase PHD2 Protein Abundance Depends on Integral Membrane Anchoring of FKBP38. *J Biol Chem*;284(34):23046-23058. 2009-01-01 [PMID: 19546213]

Howitt J, Putz U, Lackovic J et al. Divalent metal transporter 1 (DMT1) regulation by Ndfip1 prevents metal toxicity in human neurons. *Proc Natl Acad Sci U S A.* 2009-08-25 [PMID: 19706893]

Foot NJ, Dalton HE, Shearwin-Whyatt LM et al. Regulation of the divalent metal ion transporter DMT1 iron homeostasis by a ubiquitin-dependent mechanism involving Ndfips WWP2. *Blood*;112(10):4268-75. 2008-11-15 [PMID: 18776082]



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### **Products Related to H00004891-M01**

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96981-0.5mg	Mouse IgG2a Kappa Isotype Control (M2AK)
H00004891-Q01-10ug	Recombinant Human NRAMP2/SLC11A2/DMT1 GST (N-Term) Protein

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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