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# DMT1 Rabbit pAb

Catalog # AP98221

## Product Information

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| **Application** | WB, IHC-P, IHC-F, IF |
| **Primary Accession** | P49281 |
| **Other Accession** | P49281 |
| **Reactivity** | Rat, Mouse |
| **Predicted** | Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 62266 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human DMT1 |
| **Epitope Specificity** | 251-350/568 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Belongs to the villin/gelsolin family. |
| **Post-translational modifications** | Actin-bundling activity is abolished upon phosphorylation by cAMP-dependent protein kinase. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | DMT1 is a major transporter of ferrous iron from the intestinal lumen. DMT1 belongs to the family of NRAMP metal ion transporters which function in diverse organisms from bacteria to human. DMT1 (NRAMP2) transports metal ions at the plasma membrane of cells of both the duodenum and in peripheral tissues, and defective DMT1 causes anaemia. |

## Additional Information

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| **Gene ID** | 4891 |
| **Other Names** | AHMIO1; DCT1; DMT1; NRAMP2; mk; van; NRAM2_HUMAN; SLC11A2; NRAMP 2; Divalent cation transporter 1; Divalent metal transporter 1 (DMT-1); Solute carrier family 11 member 2; NRAM2_MOUSE; solute carrier family 11 (proton-coupled divalent metal ion transporter), member 2; Natural resistance-associated macrophage protein 2; divalent metal transporter 1 |
| **Dilution** | WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | SLC11A2 |
| **Synonyms** | DCT1, DMT1, NRAMP2 |
| **Function** | Proton-coupled metal ion symporter operating with a proton to metal ion stoichiometry of 1:1 (PubMed:17109629, PubMed:17293870, PubMed:22736759, PubMed:25326704, PubMed:25491917, PubMed:39824808). Selectively transports various divalent metal cations, in decreasing affinity: Cd(2+) > Fe(2+) > Co(2+), Mn(2+) >> Zn(2+), Ni(2+), VO(2+) (PubMed:17109629, PubMed:17293870, PubMed:22736759, PubMed:25326704, PubMed:25491917). Essential for maintenance of iron homeostasis by modulating intestinal absorption of dietary Fe(2+) and TF-associated endosomal Fe(2+) transport in erythroid precursors and other cells (By similarity). Enables Fe(2+) and Mn(2+) ion entry into mitochondria, and is thus expected to promote mitochondrial heme synthesis, iron-sulfur cluster biogenesis and antioxidant defense (By similarity) (PubMed:24448823). Can mediate uncoupled fluxes of either protons or metal ions. |
| **Cellular Location** | [Isoform 1]: Early endosome membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Note=Predominantly localizes in early endosomes that underlie the apical membrane of polarized epithelia. [Isoform 3]: Cell membrane |
| **Tissue Location** | Ubiquitously expressed. Expressed in erythroid progenitors. |

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