SLC11A2 Protein, Human (Sf9, His, MBP, FLAG)

Cat. No.:	HY-P702017
Synonyms:	SLC11A2; Natural resistance-associated macrophage protein 2; NRAMP 2; Divalent cation transporter 1; Divalent metal transporter 1; DMT-1; Solute carrier family 11 member 2
Species:	Human
Source:	Sf9 insect cells
Accession:	P49281 (V2-R568)
Gene ID:	4891
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	The SLC11A2 protein, a proton-coupled metal ion symporter, operates with a proton to metal ion stoichiometry of 1:1, selectively transporting various divalent metal cations with varying affinities, including Cd(2+), Fe(2+), Co(2+), Mn(2+), and less significantly Zn(2+), Ni(2+), VO(2+). It plays a crucial role in maintaining iron homeostasis by modulating the intestinal absorption of dietary Fe(2+) and facilitating the transport of TF-associated endosomal Fe(2+) in erythroid precursors and other cells. Additionally, SLC11A2 facilitates the entry of Fe(2+) and Mn(2+) ions into mitochondria, suggesting its involvement in promoting mitochondrial heme synthesis, iron-sulfur cluster biogenesis, and antioxidant defense. Notably, the protein exhibits the ability to mediate uncoupled fluxes of either protons or metal ions, showcasing its versatile transport capabilities.

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