

Product Information

MemDX™ Membrane Protein Human SLC4A1 (Solute carrier family 4 member 1 (Diego blood group)) for Antibody Discovery

Cat. No.: **MP0730J**

This product is for research use only and is not intended for diagnostic use.

This product is a 101.6 kDa Human SLC4A1 membrane protein expressed in HEK293T. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

Product Specifications

Host Species

Human

Target Protein

SLC4A1

Protein Length

Full-length

Protein Class

Druggable Genome, Transmembrane

Molecular Weight

101.6 kDa

TMD

12

Sequence

MEELQDDYEDMMEENLEQEEYEDPDIHESQMEEPAAHDTATDYHTTSHPGTHKVVYVELQELVMDEKN
QELRWMEAAARWVQLEENLGENGAWGRPHLSHLTFWSLLELRRVFTKGTVLLDLQETSLAGVANQLLDRFI
FEDQIRPQDREELLRALLLKHSHAGELEALGGVKPAVLTRSGDPSQPLLQHSLETQLFCEQGDGGTEG
HSPSGILEKIPPDSEATLVLVGRADFLEQPVLG FVRLQEAAELEAVELPVPIRFLFVLLGPEAPHIDYTQ
LGRAAATLMSEVRFRIDAYMAQSRGELLHSLEGFLDCSLVLPPTDAPSEQALLSLVPVQRELLRRRYQSS
PAKPDSSFYKGLDLNGGPDDPLQQTGQLFGGLVRDIRRRYPYYLSDITDAFSPQVLA AVIFIYFAALSPA
ITFGGLLGEKTRNQMGVSELLISTAVQGILFALLGAQPLL VVGFSGPLLVFEEAFFSFCETNGLEYIVGR
VWIGFWLILLVVLVAFEGSFLVRFISRYTQEIFSFLISLIFIYETFSKLKIFQDHPLQKTYNNVLMV
PKPQGPLPNTALLSLVLMAGTFFFAMMLRKFKNSSYFPGKLRRVIGDFGVPISILIMVLVDFFIQDITYTQ
KLSVPDGFKVSNSARGWVIHPLGLRSEFPIMMMFASALPALLVFILIFLESQITTLIVSKPERKMKVKG
GFHLDLLL VVGMGVAALFGMPWLSATTVRSVTHANALTMGKASTPGAAAQIQEVKEQRISGLLVAVLV
GLSILMEPILSRIPAVLFGIFLYMGVTSLSGIQLFDRILLFKPPKYHPDVPYVKRVKTRWMLHFTGIQ
IICLAVLWVKSTPASLALPFVLILTVPLRRVLLPLIFRNVELQCLDADDAKATFDEEEGRDEYDEVAMP
V

Product Description

Expression Systems

HEK293T

Tag

C-Myc/DDK

Form

Liquid

Purification

Anti-DDK affinity column followed by conventional chromatography steps

Purity

> 80% as determined by SDS-PAGE and Coomassie blue staining

Buffer

25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol

Storage

Store at +4°C for up to one week or several months at -80°C

Target

Target Protein

SLC4A1

Full Name

Solute carrier family 4 member 1 (Diego blood group)

Introduction

The protein encoded by this gene is part of the anion exchanger (AE) family and is expressed in the erythrocyte plasma membrane, where it functions as a chloride/bicarbonate exchanger involved in carbon dioxide transport from tissues to lungs. The protein comprises two domains that are structurally and functionally distinct. The N-terminal 40kDa domain is located in the cytoplasm and acts as an attachment site for the red cell skeleton by binding ankyrin. The glycosylated C-terminal membrane-associated domain contains 12-14 membrane spanning segments and carries out the stilbene disulphonate-sensitive exchange transport of anions. The cytoplasmic tail at the extreme C-terminus of the membrane domain binds carbonic anhydrase II. The encoded protein associates with the red cell membrane protein glycophorin A and this association promotes the correct folding and translocation of the exchanger. This protein is predominantly dimeric but forms tetramers in the presence of ankyrin. Many mutations in this gene are known in man, and these mutations can lead to two types of disease: destabilization of red cell membrane leading to hereditary spherocytosis, and defective kidney acid secretion leading to distal renal tubular acidosis. Other mutations that do not give rise to disease result in novel blood group antigens, which form the Diego blood group system. Southeast Asian ovalocytosis (SAO, Melanesian ovalocytosis) results from the heterozygous presence of a deletion in the encoded protein and is common in areas where Plasmodium falciparum malaria is endemic. One null mutation in this gene is known, resulting in very severe anemia and nephrocalcinosis.

Alternative Names

DI; FR; SW; WD; WR; AE1; CHC; SAO; WD1; BND3; EPB3; SPH4; CD233; EMPB3; RTA1A

Gene ID

[6521](#)

UniProt ID

[P02730](#)