

Recombinant Human SLC4A1 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. SLC4A1-4674H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

SLC4A1 MS Standard C13 and N15-labeled recombinant protein (NP_000333) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.

Species

Human

Source

HEK293

Description

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

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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.

Molecular Mass 101.6 kDa

AA Sequence

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MEELQDDYEDMMEENLEQEEYEDPDIHESQMEEPAHDTEATATDYHTTSHPGTH
KVYVELQELVMDEKNQELRWMEARWVQLEENLGENGAWGRPHLSHLTFWSLLE
LRRVFTKGTVLLDLQETSLAGVANQLLDRFIFEDQIRPQDREELLRALLLKSHAGEL
EALGGVKPAVLTRSGDPSQPLLQHSSLETQLFCEQGDGGTEGHSPSGILEKIPPDS
EATLVLVGRADFLEQPVLGFVRLQEAAELEAVELPVPIRFLFVLLGPEAPHIDYTLQG
RAAATLMSERVFRIDAYMAQSRGELLHSLEGFLDCSLVLPPTDAPSEQALLSLVPVQ
RELLRRRYQSSPAKPDSSFYKGLDLNGGPDDPLQQTGQLFGGLVRDIRRRYPYLS
DITDAFSPQVLAAVIFIYFAALSPAITFGGLLGEKTRNQMGVSELLISTAVQGILFALLG
AQPLLVVGFSGPLLVFEEAFFSFCETNGLEYIVGRVWIGFWLILLVVLVAFEGSFLV
RFISRYTQEIFSFLISLIFIYETFSKLIKIFQDHPLQKTYNYNVLMPKQGPLPNTALLS
LVLMAGTFFFAMMLRKFKNSSYFPGKLRVIGDFGVPISILIMVLVDFFIQDTYTQKLS
VPDGFKVSNSARGWVIHPLGLRSEFPWIWMMFASALPALLVFILIFLESQITTLIVSKPE
RKMVKGSGFHLDLLL VVGMGGVAALFGMPWLSATTVRSVTHANAL TVMGKASTPG
AAAQIQEVKEQRISGLLVAVLVGLSILMEPILSRIPLAVLFGIFLYMGVTSLSGIQLFDRI
LLLFKPPKYHPDVPYVKRVKTWRMHLFTGIQIICLAVLWVVKSTPASLALPFVLILTVP
LRRVLLPLIFRNVELQCLDADDAKATFDEEEGRDEYDEVAMPVTRTRPLEQKLISEE
DLAANDILDYKDDDDKV
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Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

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Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 µg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.
GENE INFORMATION	
Gene Name	SLC4A1 solute carrier family 4 member 1 (Diego blood group) [Homo sapiens (human)]
Official Symbol	SLC4A1
Synonyms	SLC4A1; solute carrier family 4, anion exchanger, member 1 (erythrocyte membrane protein band 3, Diego blood group); AE1, DI, EPB3, Waldner blood group, WD; band 3 anion transport protein; CD233; FR; Froese blood group; RTA1A; SW; Swann blood group; WR; Wright blood group; anion exchanger 1; anion exchanger-1; Waldner blood group; anion exchange protein 1; erythroid anion exchange protein; erythrocyte membrane protein band 3; solute carrier family 4, anion exchanger, number 1; DI; WD; AE1; WD1; BND3; EPB3; EMPB3; MGC116750; MGC116753; MGC126619; MGC126623;
Gene ID	6521
mRNA Refseq	NM_000342
Protein Refseq	NP_000333
MIM	109270
UniProt ID	P02730

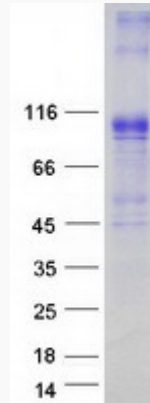
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SDS-PAGE



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