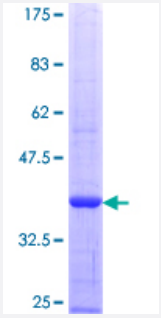
SLC4A1 (Human) Recombinant Protein (Q01)

Catalog # H00006521-Q01 Size 25 ug, 10 ug

Applications



Specification

Product Description	Human SLC4A1 partial ORF (NP_000333.1, 261 a.a. - 360 a.a.) recombinant protein with GST-tag at N-terminal.
Sequence	PIRFLFVLLGPEAPHIDYTQLGRAAATLMSERVFRIDAYMAQSRGELLHSLEGFLDCSLVLPPTDAP SEQALLSLVPVQRELLRRRYQSSPAKPDSSFYK
Host	Wheat Germ (in vitro)
Theoretical MW (kDa)	36.74
Preparation Method	*in vitro* wheat germ expression system
Purification	Glutathione Sepharose 4 Fast Flow
Quality Control Testing	12.5% SDS-PAGE Stained with Coomassie Blue.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Best use within three months from the date of receipt of this protein.

Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

Gene Info — SLC4A1

Entrez GeneID	6521
GeneBank Accession#	NM_000342
Protein Accession#	NP_000333.1
Gene Name	SLC4A1
Gene Alias	AE1, BND3, CD233, DI, EMPB3, EPB3, FR, MGC116750, MGC116753, MGC126619, MGC126623, RTA1A, SW, WD, WD1, WR
Gene Description	solute carrier family 4, anion exchanger, member 1 (erythrocyte membrane protein band 3, Diego blood group)
Omim ID	109270 110500 112010 112050 601550 601551 602722
Gene Ontology	Hyperlink

Gene Summary	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. [provided by RefSeq
Other Designations	Froese blood group|Swann blood group|Waldner blood group|Wright blood group|anion exchange protein 1|anion exchanger 1|erythrocyte membrane protein band 3|erythroid anion exchange protein|solute carrier family 4, anion exchanger, member 1

Disease

- Anemia
- Cardiovascular Diseases
- Diabetes Mellitus
- Edema
- Elliptocytosis
- Genetic Predisposition to Disease
- Hyperparathyroidism
- Hypertension
- Malaria
- Priapism
- Spherocytosis
- Thalassemia