RecomAb™

SLC4A1 recombinant monoclonal antibody, clone R04-2Q1

Catalog # RAB05229 Size 100 uL

Specification

Product Description	Rabbit recombinant monoclonal antibody raised against human Band 3.
Antibody Species	Rabbit
Immunogen	Original antibody is raised against recombinant protein corresponding to human Band 3
Theoretical MW (kDa)	Calculated MW: 102 k
Reactivity	Human
Form	Liquid
Isotype	IgG
Recommend Usage	Immunofluorescence (1/50-1/200) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)(1/50-1/100) Western Blot (1/500-1/1000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, 150mM NaCl, pH 7.4 (50% glycerol and 0.02% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

- Western Blot
- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)
- Immunocytochemistry

- Immunofluorescence

Gene Info — SLC4A1

Entrez GeneID	6521
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