

Product datasheet for **SC314903**

Band 3 (SLC4A1) (NM_000342) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Band 3 (SLC4A1) (NM_000342) Human Untagged Clone
Tag:	Tag Free
Symbol:	Band 3
Synonyms:	AE1; BND3; CD233; CHC; DI; EMPB3; EPB3; FR; RTA1A; SAO; SPH4; SW; WD; WD1; WR
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene sequence for NM_000342 edited
 ATGGAGGAGCTGCAGGATGATTATGAAGACATGATGGAGGAGAATCTGGAGCAGGAGGAA
 TATGAAGACCCAGACATCCCCGAGTCCCAGATGGAGGAGCCGGCAGCTCACGACACCGAG
 GCAACAGCCACAGACTACCACACCACATCACACCCGGGTACCCACAAGGTCTATGTGGAG
 CTGCAGGAGCTGGTGTGGACGAAAAGAACCAGGAGCTGAGATGGATGGAGGCGGCGCG
 TGGGTGCAACTGGAGGAGAACCTGGGGGAGAATGGGGCCTGGGGCCGCCCGCACCTCTCT
 CACCTCACCTTCTGGAGCCTCTAGAGCTGCGTAGAGTCTTACCAAGGGTACTGCTCTC
 CTAGACCTGCAAGAGACCTCCCTGGCTGGAGTGGCCAACCAACTGCTAGACAGGTTTATC
 TTTGAAGACCAGATCCGGCCTCAGGACCGAGAGGAGCTGCTCCGGGCCCTGCTGTTAAA
 CACAGCCACGCTGGAGAGCTGGAGGCCCTGGGGGTGTGAAGCCTGCAGTCTGACACGC
 TCTGGGGATCCTTACAGCCTCTGCTCCCCAACACTCCTCACTGGAGACACAGCTTTC
 TGTGAGCAGGGAGATGGGGCACAGAAGGGCACTACCATCTGGAATTCTGAAAAGATT
 CCCCCGGATTAGAGGCCACGTTGGTGTAGTGGGCCGCGCCGACTTCTGGAGCAGCCG
 GTGCTGGGCTTCTGAGGCTGCAGGAGGCAGCGAGCTGGAGGCGGTGGAGCTGCCGGTG
 CCTATACGCTTCTCTTTGTGTTGCTGGGACCTGAGGCCCCACATCGATTACACCCAG
 CTTGGCCGGGCTGCTGCCACCCTCATGTAGAGAGGGTGTCCGATAGATGCCTACATG
 GCTCAGAGCCGAGGGGAGCTGCTGCACTCCCTAGAGGGTTCCTGGACTGCAGCCTAGTG
 CTGCTCCACCAGTACCCCTCCGAGCAGGCACTGCTCAGTCTGGTGCCTGTGCAGAGG
 GAGTACTTCAAGGCGCTATCAGTCCAGCCCTGCCAAGCCAGACTCCAGCTTCTACAAG
 GGCCTAGACTTAAATGGGGGCCAGATGACCCTCTGCAGCAGACAGGCCAGCTTCTCGGG
 GGCCTGGTGCATGATCCGGCGCCGCTACCCCTATTACCTGAGTGACATCACAGATGCA
 TTCAGCCCCCAGTCTGGTGCCTCATCTTCTACTTTGCTGCACTGTACCCCGCC
 ATCACCTTCGGCGCCTCCTGGGAGAAAAGACCCGGAACAGATGGGAGTGTCCGAGCTG
 CTGACTCCACTGCAGTGCAGGGCATTCTTTCGCCCTGCTGGGGCTCAGCCCCCTGCTT
 GTGGTTCGCTTCTCAGGACCCCTGCTGGTGTGTTGAGGAAGCCTTCTTCTCGTTCTGCGAG
 ACCAACGGTCTAGAGTACATCGTGGGCCGCTGTGGATCGGCTTCTGGCTCATCTGCTG
 GTGGTGTGGTGGTGGCCTTCGAGGGTAGCTTCTGGTCCGCTTCTATCTCCCGTATAACC
 CAGGAGATCTTCTCCTCCTCATTCCCTCATCTTCTATGAGACTTCTCCAAGCTG
 ATCAAGATCTTCCAGGACCACCCACTACAGAAGACTTATAACTACAACGTGTTGATGGT
 CCCAACCTCAGGGCCCCCTGCCAACACAGCCCTCCTCTCCCTGTGCTCATGGCCGGT
 ACCTTCTTCTTTGCCATGATGCTGCGCAAGTCAAGAACAGCTCCTATTTCCCTGGCAAG
 CTGCGTCCGGTCACTCGGGGACTTCGGGGTCCCCATCTCCATCCTGATCATGGTCCCTGGT
 GATTTCTTCACTCAGGATACCTACACCCAGAACTCTCGGTGCCTGATGGCTTCAAGGT
 TCCAACCTCCTCAGCCCGGGGCTGGGTACACCCCACTGGGCTTGCCTCCGAGTTTCCC
 ATCTGGATGATGTTTGCCTCCGCCCTGCCTGCTGCTGGTCTTCTATCTCATATTCTG
 GAGTCTCAGATCACACGCTGATTGTGAGCAAACTGAGCGCAAGATGGTCAAGGGCTCC
 GGCTTCCACCTGGACCTGCTGCTGGTAGTAGGCATGGGTGGGGTGGCCGCCCTCTTTGGG
 ATGCCCTGGCTCAGTGCCACCACCGTGCCTTCCGTACCCATGCCAACGCCCTCACTGTC
 ATGGGCAAAGCCAGCACCCAGGGGCTGCAGCCAGATCCAGGAGGTCAAAGAGCAGCGG
 ATCAGTGGACTCCTGGTGCCTGTGCTTGTGGCCCTGTCCATCCTCATGGAGCCATCCTG
 TCCCGCATCCCCCTGGGTACTGTTTGGCATTTCTCTACATGGGGGTACGTCGCTC
 AGCGGCATCCAGCTCTTTGACCGCATCTTGTCTTGTCAAGCCACCAAGTATCACCCA
 GATGTGCCCTACGTCAAGCGGTGAAGACCTGGCGCATGCACTTATTACGGGCATCCAG
 ATCATCTGCTGGCAGTGTGTTGGTGGTGAAGTCCACGCCGGCCTCCCTGGCCCTGCC
 TTCGCTCATCCTCACTGTGCCGCTGCGGCGCTCCTGCTGCCGCTCATCTTCAGGAAC
 GTGGAGCTTCAAGTGTCTGGATGCTGATGATGCCAAGGCAACCTTTGATGAGGAGGAAGT
 CGGGATGAATACGACGAAGTGGCCATGCCTGTGTGA

Restriction Sites: Please inquire
ACCN: NM_000342
Insert Size: 2700 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_000342.1, NP_000333.1</u>
RefSeq Size:	3637 bp
RefSeq ORF:	2736 bp
Locus ID:	6521
UniProt ID:	<u>P02730</u>
Cytogenetics:	17q21.31
Domains:	HCO3_cotransp
Protein Families:	Druggable Genome, Transmembrane

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, Jul 2008]