ANK1 cDNA Clone – Ankyrin 1, Erythrocytic (Human)

PRODUCT OVERVIEW

Product Name	ANK1, cDNA Clone
Full Product Name	ANK1 cDNA Clone
Product Gene Name	ANK1 cdna clone
Sequence	atgtggactt tcgtcaccca gctgttggtc acgctggtgc tgctgagctt cttcctggtc agctgtcaga acgtgatgca cattgtcagg gggtccctgt gctttgtgct aaagcacatc caccaggagc tggacaagga gctgggggag agcgaggacc tcagtgacga cgaggagacc atctccacca gggtggtccg gcggcgggtc ttcctgaagg ggaatgagtt tcagaatatt ccaggggagc aggtgacaga ggagcaattc acggatgagc agggcaacat tgtcaccaag aagatcattc gcaaggtggt tcgacagata gacttgtcca gcgccgatgc cgcccaggag cacgaggagg tggagctgag agggagtggc ctacagccgg acctgataga gggcaggaag ggggcgcaga tagtgaagcg ggccagcctg aaaaggggga aacagtga
Molecular Weight	17,854 Da
OMIM	182900
Vector	pENTR223.1 or pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for ANK1 cdna clone	MBS1274534 is a cDNA clone targeting ANK1.
Other Notes	Small volumes of ANK1 cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ANK1. It may not necessarily be applicable to this product.

NCBI GI #	21410935
NCBI GeneID	286
NCBI Accession #	BC030957
UniProt Secondary Accession #	O43400; Q13768; Q53ER1; Q59FP2; Q8N604; Q99407; A0PJN8; A6NJ23; E5RFL7
UniProt Related Accession #	P16157
NCBI Official Full Name	Homo sapiens ankyrin 1, erythrocytic, mRNA
NCBI Official Synonym Full Names	ankyrin 1
NCBI Official Symbol	ANK1
NCBI Official Synonym Symbols	ANK; SPH1; SPH2
UniProt Protein Name	Ankyrin-1
UniProt Synonym Protein Names	Ankyrin-R; Erythrocyte ankyrin
Protein Family	Ankyrin
UniProt Gene Name	ANK1

UniProt Synonym Gene Names	ANK; ANK-1
UniProt Entry Name	ANK1_HUMAN
NCBI Protein Information	ankyrin-1
NCBI Summary for ANK1	Ankyrins are a family of proteins that link the integral membrane proteins to the underlying spectrin-actin cytoskeleton and play key roles in activities such as cell motility, activation, proliferation, contact and the maintenance of specialized membrane domains. Multiple isoforms of ankyrin with different affinities for various target proteins are expressed in a tissue-specific, developmentally regulated manner. Most ankyrins are typically composed of three structural domains: an amino-terminal domain containing multiple ankyrin repeats; a central region with a highly conserved spectrin binding domain; and a carboxy-terminal regulatory domain which is the least conserved and subject to variation. Ankyrin 1, the prototype of this family, was first discovered in the erythrocytes, but since has also been found in brain and muscles. Mutations in erythrocytic ankyrin 1 have been associated in approximately half of all patients with hereditary spherocytosis. Complex patterns of alternative splicing in the regulatory domain, giving rise to different isoforms of ankyrin 1 have been described. Truncated muscle-specific isoforms of ankyrin 1 resulting from usage of an alternate promoter have also been identified. [provided by RefSeq, Dec 2008]
UniProt Comments for ANK1	ANK1: Attaches integral membrane proteins to cytoskeletal elements; binds to the erythrocyte membrane protein band 4.2, to Na-K ATPase, to the lymphocyte membrane protein GP85, and to the cytoskeletal proteins fodrin, tubulin, vimentin and desmin. Erythrocyte ankyrins also link spectrin (beta chain) to the cytoplasmic domain of the erythrocytes anion exchange protein; they retain most or all of these binding functions. Defects in ANK1 are a cause of spherocytosis type 1 (SPH1); also called hereditary spherocytosis type 1 (HS1). Spherocytosis is a hematologic disorder leading to chronic hemolytic anemia and characterized by numerous abnormally shaped erythrocytes which are generally spheroidal. Inheritance can be autosomal dominant or recessive. 21 isoforms of the human protein are produced by alternative promoter. Protein type: Adaptor/scaffold; Cell development/differentiation; Endoplasmic reticulum; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 8p11.1 Cellular Component: cytoplasm; cytosol; plasma membrane Molecular Function: ATPase binding; cytoskeletal adaptor activity; enzyme binding; protein binding; spectrin binding; structural constituent of cytoskeleton Biological Process: ER to Golgi vesicle-mediated transport; maintenance of epithelial cell polarity Disease: Spherocytosis, Type 1
Research Articles on ANK1	**1.** analysis of a novel p.Q1772X ANK1 mutation in a Korean family with hereditary spherocytosis [case report of two family members]
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