10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Ankyrin erythroid/ANK/ANK1 Antibody Picoband™ (monoclonal, 9I6C3)

Catalog # ABO16593

Product Information

Application	WB
Primary Accession	P16157
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Ankyrin erythroid/ANK/ANK1 Antibody Picoband™ (monoclonal, 9I6C3) . Tested in WB applications. This antibody reacts with Human.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	286
Other Names	Ankyrin-1, ANK-1, Ankyrin-R, Erythrocyte ankyrin, ANK1 (HGNC:492), ANK
Calculated MW	206265
Application Details	Western blot, 0.25-0.5 □g/ml, Human
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 9I6C3
Immunogen	E.coli-derived human Ankyrin erythroid/ANK/ANK1 recombinant protein (Position: N1300-Q1844).
Purification	Immunogen affinity purified.
Storage	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Protein Information

Name	ANK1 (HGNC:492)

Synonyms	ANK
Function	Component of the ankyrin-1 complex, a multiprotein complex involved in the stability and shape of the erythrocyte membrane (PubMed:35835865). 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.
Cellular Location	[Isoform Er1]: Cytoplasm, cytoskeleton. Note=Probably the other erythrocyte (Er) isoforms, are located near the surface of erythrocytic plasma membrane [Isoform Mu18]: Sarcoplasmic reticulum [Isoform Mu20]: Sarcoplasmic reticulum
Tissue Location	Isoform Mu17, isoform Mu18, isoform Mu19 and isoform Mu20 are expressed in skeletal muscle. Isoform Br21 is expressed in brain.

Background

Ankyrin 1, erythrocytic, also known as ANK1, is a protein that in humans is encoded by the ANK1 gene. 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.

Images

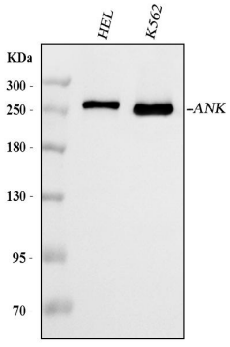

Figure 1. Western blot analysis of Ankyrin erythroid/ANK/ANK1 using anti-Ankyrin erythroid/ANK/ANK1 antibody (M02716). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HEL whole cell lysates,
Lane 2: human K562 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Ankyrin erythroid/ANK/ANK1 antigen affinity purified monoclonal antibody (Catalog # M02716) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit

(Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Ankyrin erythroid/ANK/ANK1 at approximately 206 kDa. The expected band size for Ankyrin erythroid/ANK/ANK1 is at 206 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.