

Ankyrin-1 Rabbit pAb

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Catalog # AP58687

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P16157
Reactivity	Mouse
Predicted	Rat, Pig, Dog, Human, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	206265
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Ankyrin erythroid
Epitope Specificity	501-600/1881
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Isoform Er1: Cytoplasm, cytoskeleton. Isoform Mu17: Membrane. Cytoplasm, myofibril, sarcomere, M line. Isoform Mu18: Sarcoplasmic reticulum. Isoform Mu19: Sarcoplasmic reticulum. Isoform Mu20: Sarcoplasmic reticulum.
DISEASE	Defects in ANK1 are a cause of spherocytosis type 1 (SPH1) [MIM:182900]; 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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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 ankyrin1 resulting from usage of an alternate promoter have also been identified. [provided by RefSeq, Dec 2008].

Additional Information

Gene ID	286
Other Names	Ankyrin-1, ANK-1, Ankyrin-R, Erythrocyte ankyrin, ANK1 (HGNC:492), ANK
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

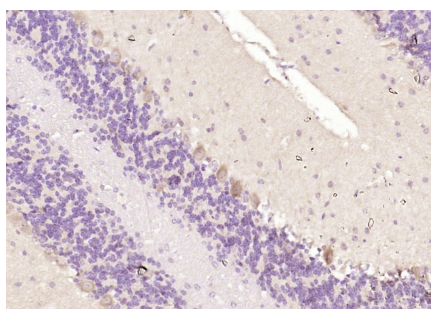
Protein Information

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

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Images



Paraformaldehyde-fixed, paraffin embedded (mouse cerebellum); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Ankyrin erythroid) Polyclonal Antibody, Unconjugated (AP58687) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.