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# Ankyrin erythroid Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58687

## Product Information

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| **Application** | IHC-P, IHC-F, IF, E |
| **Primary Accession** | P16157 |
| **Reactivity** | Rat, Pig, Dog, Bovine |
| **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. |
| **SIMILARITY** | Contains 23 ANK repeats.Contains 1 death domain.Contains 1 ZU5 domain. |
| **SUBUNIT** | Interacts with a number of integral membrane proteins and cytoskeletal proteins. Interacts (via N-terminus) with SPTB/spectrin (beta chain). Interacts (via N-terminus ANK repeats) with SLC4A1/erythrocyte membrane protein band 3 (via cytoplasmic N-terminus). Also interacts with TTN/titin. Isoform Mu17 interacts with OBSCN isoform 3/obscurin. |
| **Post-translational modifications** | Regulated by phosphorylation.Palmitoylated. |
| **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

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| **Gene ID** | 286 |
| **Other Names** | Ankyrin-1, ANK-1, Ankyrin-R, Erythrocyte ankyrin, ANK1, ANK |
| **Target/Specificity** | Isoform Mu17, isoform Mu18, isoform Mu19 and isoform Mu20 are expressed in skeletal muscle. Isoform Br21 is expressed in brain. |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **Format** | 0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce |
| **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

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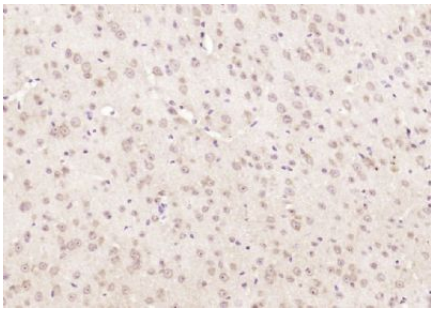
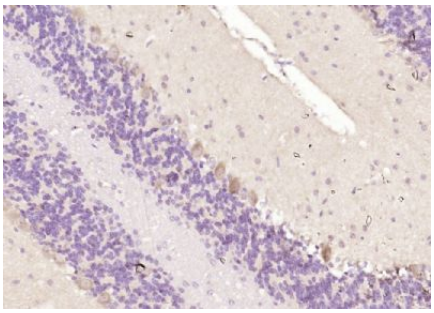
| **Name** | ANK1 ( HGNC:492) |
| **Synonyms** | ANK |
| **Function** | Component of the ankyrin-1 complex, a multiprotein complex involved in the stability and shape of the erythrocyte membrane (PubMed:35835865). Attaches integral membrane proteins to cytoskeletal elements; binds to the erythrocyte 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. |

## Images

Paraformaldehyde-fixed, paraffin embedded (mouse brain); 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) instructionsand DAB staining.



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) instructionsand DAB staining.