Product Name: 4.1R Rabbit Polyclonal Antibody
Catalog #: APRab06323

Summary

Production Name	4.1R Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human,Mouse

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	EPB41
Alternative Names	EPB41; E41P; Protein 4.1; P4.1; 4.1R; Band 4.1; EPB4.1
Gene ID	2035.0
SwissProt ID	P11171.The antiserum was produced against synthesized peptide derived from human EPB41. AA range:626-675

Application

Dilution Ratio	WB 1:500-1:2000. ELISA: 1:5000.
Molecular Weight	60kD

Background

The protein encoded by this gene, together with spectrin and actin, constitute the red cell membrane cytoskeletal network.

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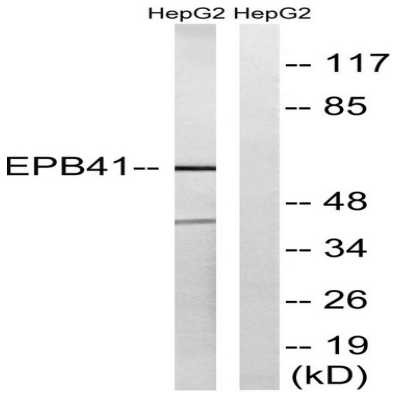
This complex plays a critical role in erythrocyte shape and deformability. Mutations in this gene are associated with type 1 elliptocytosis (EL1). Alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Oct 2009],disease:Defects in EPB41 are a cause of hereditary pyropoikilocytosis (HPP) [MIM:266140]. HPP is an autosomal recessive hematologic disorder characterized by hemolytic anemia, microspherocytosis, poikilocytosis, and an unusual thermal sensitivity of red cells.,disease:Defects in EPB41 are the cause of elliptocytosis type 1 (EL1) [MIM:611804]. EL1 is a Rhesus-linked form of hereditary elliptocytosis, a genetically heterogeneous, autosomal dominant, hematologic disorder. It is characterized by variable hemolytic anemia and elliptical or oval red cell shape.,function:Protein 4.1 is a major structural element of the erythrocyte membrane skeleton. It plays a key role in regulating membrane physical properties of mechanical stability and deformability by stabilizing spectrin-actin interaction. Recruits DLG1 to membranes.,PTM:O-glycosylated; contains N-acetylglucosamine side chains in the C-terminal domain.,PTM:Phosphorylated at multiple sites by different protein kinases and each phosphorylation event selectively modulates the protein's functions.,PTM:Phosphorylation on Tyr-660 reduces the ability of 4.1 to promote the assembly of the spectrin/actin/4.1 ternary complex.,similarity:Contains 1 FERM domain.,subunit:Binds with a high affinity to glycophorin and with lower affinity to band III protein. Associates with the nuclear mitotic apparatus. Binds calmodulin, CENPJ and DLG1. Also found to associate with contractile apparatus and tight junctions.,

Research Area

Tight junction;

Image Data



Western blot analysis of lysates from HepG2 cells treated with PMA 125ng/ml 30 ', using EPB41 Antibody. The lane on the right is blocked with the synthesized peptide.

Note

For research use only.