



Rabbit Anti-EPB41 antibody

SL13080R

Product Name:	EPB41
Chinese Name:	红The cell membrane条带4.1蛋白抗体
Alias:	4.1R; 41_HUMAN; Band 4.1; E41P; EL 1; EL1; Elliptocytosis 1; Elliptocytosis 1 RH linked; EPB 4.1; EPB 41; EPB4.1; Epb41; Erythrocyte membrane protein band 4.1 (elliptocytosis 1 RH linked); Erythrocyte membrane protein band 4.1; Erythrocyte surface protein band 4.1; HE; P4.1; Protein 4.1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Horse,Rabbit,Sheep,Recombinant Fragment
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	97kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human EPB41/4.1R:751-864/864
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	The 4.1 gene family encodes a group of multifunctional cytoskeletal proteins (4.1R, 4.1G, 4.1N and 4.1B), which are predominantly expressed in the nervous system. 4.1G is a protein that stabilizes spectrin-actin interactions and is associated with hereditary elliptocytosis. Red blood cell 4.1, designated 4.1R, is a multifunctional protein that is

essential for maintaining erythrocyte shape and membrane mechanical properties. Both 4.1R and 4.1G are distributed in a unique pattern in the cerebellum and are believed to modulate the membrane mechanical properties of neuronal cells by promoting fodrin/actin association. 4.1N and 4.1B, designated EPB41L1 and EPB41L3, respectively, are strongly expressed in the brain. Antibodies to 4.1N have been reported to detect multiple forms, each enriched in postsynaptic density preparations relative to brain homogenate. Antibodies to 4.1B have been reported to detect two forms.

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.

Subcellular Location:

Cytoplasm > cytoskeleton. Cytoplasm > cell cortex. Nucleus.

Post-translational modifications:

Phosphorylated at multiple sites by different protein kinases and each phosphorylation event selectively modulates the protein's functions.

Phosphorylation on Tyr-660 reduces the ability of 4.1 to promote the assembly of the spectrin/actin/4.1 ternary complex.

O-glycosylated; contains N-acetylglucosamine side chains in the C-terminal domain.

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. 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.

Similarity:

Contains 1 FERM domain.

SWISS:

P11171

Gene ID:

2035

Database links:

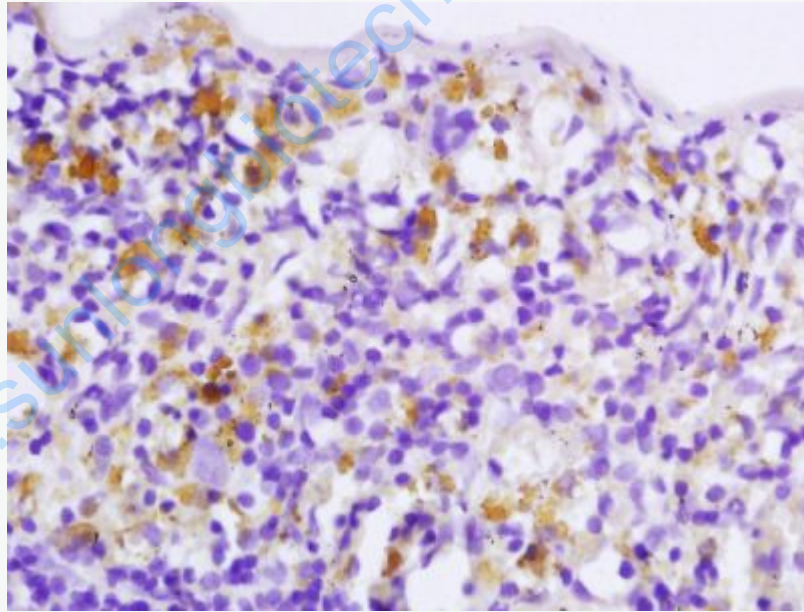
[Entrez Gene: 2035](#)Human

[Entrez Gene: 269587](#)Mouse

[Oimim: 130500](#)Human
[SwissProt: P11171](#)Human
[SwissProt: P48193](#)Mouse
[Unigene: 175437](#)Human
[Unigene: 708933](#)Human
[Unigene: 712722](#)Human
[Unigene: 30038](#)Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Tissue/cell: rat spleen tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-EPB41 Polyclonal Antibody, Unconjugated(SL13080R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and

	DAB(C-0010) staining
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