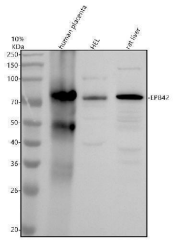
EPB42 Antibody / Protein 4.2 Antibody (FY13606)

Catalog No.	Formulation	Size
FY13606	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Human, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P16452
Applications	Western blot: 0.5-1ug/ml ELISA: 0.1-0.5 ug/ml
Limitations	This EPB42 Antibody / Protein 4.2 Antibody is intended for research use only.



EPB42 Antibody by WB in human and rat samples. Western blot analysis using Protein 4.2 Antibody detects a band near 77 kDa in human placenta (lane 1), HEL cells (lane 2), and rat liver (lane 3). The observed migration is compared with the calculated molecular weight of approximately 77 kDa. Reduced lysates containing 30 ug protein per lane were separated by 10% SDS-PAGE and transferred to nitrocellulose. Following blocking with 5% nonfat milk, the membrane was incubated with primary antibody at 0.5 ug/mL overnight at 4oC. Bound antibody was detected using an HRP-conjugated secondary antibody and chemiluminescence.

Description

EPB42 Antibody / Protein 4.2 Antibody recognizes EPB42, a protein with important roles in cellular physiology. Protein 4.2 is a peripheral membrane protein of the erythrocyte cytoskeleton encoded by EPB42. It helps stabilize the red blood cell membrane by participating in the multiprotein junctions that connect integral membrane components with the spectrin-actin network. Mature erythrocytes must deform repeatedly to pass through narrow capillaries and splenic passages, making the mechanical organization of their membrane essential for normal circulation.

Protein 4.2 associates with band 3, the anion exchanger SLC4A1, and contributes to the organization of complexes containing ankyrin and other cytoskeletal components. These interactions support membrane cohesion and influence the distribution of proteins that maintain erythrocyte shape. Although protein 4.2 belongs to a family related to

transglutaminases, it lacks the catalytic activity characteristic of many transglutaminase enzymes. Its principal recognized role is structural rather than enzymatic. Protein 4.2 Antibody is a useful designation for this molecular target.

Loss-of-function variants in EPB42 can cause hereditary spherocytosis type 5, a disorder in which red blood cells become less deformable and more susceptible to destruction in the spleen. Affected cells may exhibit reduced membrane stability, altered morphology, and shortened survival. Protein 4.2 deficiency can also perturb the assembly or retention of associated membrane proteins, illustrating the interdependence of erythrocyte cytoskeletal components.

Expression of EPB42 is closely linked to erythroid differentiation and the maturation of red blood cells. The protein becomes part of the specialized membrane architecture that allows erythrocytes to combine flexibility with resistance to mechanical stress. Its biology connects membrane-protein assembly, inherited hemolytic anemia, and the distinctive physiology of the circulating red blood cell. NSJ Bioreagents provides EPB42 Antibody for research into the molecular biology of EPB42. An EPB42 Antibody supports investigation of the biological processes associated with this protein.

Explore related research targets in our Cardiovascular Antibodies collection.

Application Notes

The optimal working dilution of the EPB42 Antibody / Protein 4.2 Antibody should be determined empirically by the investigator.

Immunogen

The EPB42 Antibody was generated using e. coli-derived human EPB42 recombinant protein (amino acids M1-N678).

Storage

After reconstitution, the EPB42 Antibody may be stored at 4oC for up to one month. For longer storage, aliquot and freeze at -20oC for up to six months. Avoid repeated freezing and thawing.

Alternate Names

EPB42 antibody, Protein 4.2 antibody, erythrocyte membrane protein band 4.2 antibody, SPH5 antibody, PA antibody, P4.2 antibody, Erythrocyte protein 4.2 antibody

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