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BLVRB (aa38-49) Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF4094a

Specification

BLVRB (aa38-49) Antibody (internal region) - Product Information

Application	**WB**
Primary Accession	P30043
Other Accession	NP_000704.1, 645
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**22119**

BLVRB (aa38-49) Antibody (internal region) - Additional Information

Gene ID 645

Other Names
Flavin reductase (NADPH), FR, 1.5.1.30, Biliverdin reductase B, BVR-B, 1.3.1.24, Biliverdin-IX beta-reductase, Green heme-binding protein, GHBP, NADPH-dependent diaphorase, NADPH-flavin reductase, FLR, BLVRB, FLR

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
BLVRB (aa38-49) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

BLVRB (aa38-49) Antibody (internal region) - Protein Information

Name BLVRB (HGNC:1063)

Function
Enzyme that can both act as a NAD(P)H-dependent reductase and a S-nitroso-CoA-dependent nitrosyltransferase (PubMed:10620517, PubMed:18241201, PubMed:27207795, PubMed:38056462, PubMed:<a href="http://www.uniprot.org/citations/7929092"

target="_blank">7929092). Promotes fetal heme degradation during development (PubMed:10858451, PubMed:18241201, PubMed:7929092). Also expressed in adult tissues, where it acts as a regulator of hematopoiesis, intermediary metabolism (glutaminolysis, glycolysis, TCA cycle and pentose phosphate pathway) and insulin signaling (PubMed:27207795, PubMed:29500232, PubMed:38056462). Has a broad specificity oxidoreductase activity by catalyzing the NAD(P)H-dependent reduction of a variety of flavins, such as riboflavin, FAD or FMN, biliverdins, methemoglobin and PQQ (pyrroloquinoline quinone) (PubMed:10620517, PubMed:18241201, PubMed:7929092). Contributes to fetal heme catabolism by catalyzing reduction of biliverdin IXbeta into bilirubin IXbeta in the liver (PubMed:10858451, PubMed:18241201, PubMed:7929092). Biliverdin IXbeta, which constitutes the major heme catabolite in the fetus is not present in adult (PubMed:10858451, PubMed:18241201, PubMed:7929092). Does not reduce bilirubin IXalpha (PubMed:10858451, PubMed:18241201, PubMed:7929092). Can also reduce the complexed Fe(3+) iron to Fe(2+) in the presence of FMN and NADPH (PubMed:10620517). Acts as a protein nitrosyltransferase by catalyzing nitrosylation of cysteine residues of target proteins, such as HMOX2, INSR and IRS1 (PubMed:38056462). S-nitroso-CoA-dependent nitrosyltransferase activity is mediated via a 'ping-pong' mechanism: BLVRB first associates with both S-nitroso-CoA and protein substrate, nitric oxide group is then transferred from S- nitroso-CoA to Cys-109 and Cys-188 residues of BLVRB and from S-nitroso-BLVRB to the protein substrate (PubMed:38056462). Inhibits insulin signaling by mediating nitrosylation of INSR and IRS1, leading to their inhibition (PubMed:38056462).

Cellular Location
Cytoplasm

Tissue Location
Predominantly expressed in liver and erythrocytes (PubMed:7929092). At lower levels in heart, lung, adrenal gland and cerebrum (PubMed:7929092). Expressed in adult red blood cells (PubMed:29932944).

BLVRB (aa38-49) Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry

- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BLVRB (aa38-49) Antibody (internal region) - Images

AF4093a (0.1 µg/ml) staining of Human Liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

BLVRB (aa38-49) Antibody (internal region) - References

Computational and experimental studies on the catalytic mechanism of biliverdin-IXbeta reductase. Smith LJ, Browne S, Mulholland AJ, Mantle TJ. The Biochemical journal 2008 May 411 (3): 475-84. PMID: 18241201