

BLVRB Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AW5035

Specification

BLVRB Antibody (C-term) - Product Information

Application WB,E
Primary Accession P30043

Other Accession
Reactivity
Q923D2, P52556
Human, Mouse

Predicted Bovine
Host Rabbit
Clonality polyclonal
Calculated MW 22119 Da
Isotype Rabbit IgG
Antigen Source HUMAN

BLVRB Antibody (C-term) - Additional Information

Gene ID 645

Antigen Region

 $161 - \bar{1}75$

Other Names

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

Dilution

WB~~1:1000

Target/Specificity

This BLVRB antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 161-175 amino acids from the C-terminal region of human BLVRB.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

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

Precautions

BLVRB Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

BLVRB Antibody (C-term) - 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: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:10858451, PubMed:10858451, 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). Snitroso-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 Snitroso-BLVRB to the protein substrate (PubMed:<a $href="http://www.uniprot.org/citations/38056462"\ target="_blank">38056462).\ Inhibits$ 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).

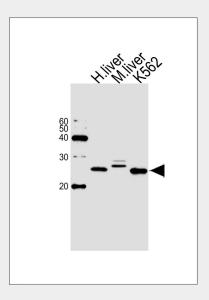


BLVRB Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

BLVRB Antibody (C-term) - Images



Western blot analysis of lysates from human liver, mouse liver tissue and K562 cell line (from left to right), using BLVRB Antibody (C-term)(Cat. #AW5035). AW5035 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

BLVRB Antibody (C-term) - Background

Broad specificity oxidoreductase that catalyzes the NADPH-dependent reduction of a variety of flavins, such as riboflavin, FAD or FMN, biliverdins, methemoglobin and PQQ (pyrroloquinoline quinone). Contributes to heme catabolism and metabolizes linear tetrapyrroles. Can also reduce the complexed Fe(3+) iron to Fe(2+) in the presence of FMN and NADPH. In the liver, converts biliverdin to bilirubin.

BLVRB Antibody (C-term) - References

Chikuba K.,et al.Biochem. Biophys. Res. Commun. 198:1170-1176(1994). Komuro A.,et al.Biol. Pharm. Bull. 19:796-804(1996). Ota T.,et al.Nat. Genet. 36:40-45(2004). Grimwood J.,et al.Nature 428:529-535(2004). Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.