

BLVRB Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AW5035

Product Information

Application	WB
Primary Accession	P30043
Other Accession	Q923D2 , P52556
Reactivity	Human, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	polyclonal
Calculated MW	22119
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	645
Antigen Region	161-175
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.

Protein Information

Name	BLVRB (HGNC:1063)
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Function	<p>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: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).</p>
Cellular Location	Cytoplasm
Tissue Location	<p>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).</p>

Background

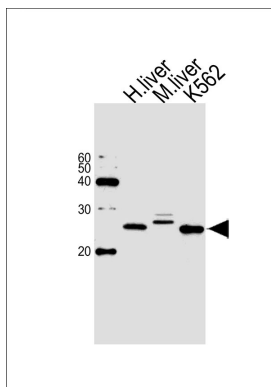
Broad specificity oxidoreductase that catalyzes the NADPH-dependent reduction of a variety of flavins, such as riboflavin, FAD or FMN, biliverdins, methemoglobin and PQQ (pyrroloquinoline quinone). Contributes to heme catabolism and metabolizes linear tetrapyrroles. Can also reduce the complexed Fe(3+)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

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.

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.