

**BLVRB Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
Catalog # AP20044c**Specification**

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**BLVRB Antibody (Center) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P30043</a>
Other Accession	<a href="#">NP_000704.1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	22119
Antigen Region	119-146

**BLVRB Antibody (Center) - Additional Information****Gene ID** 645**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

**Target/Specificity**

This BLVRB antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 119-146 amino acids from the Central region of human BLVRB.

**Dilution**

WB~~1:1000

**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 (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**BLVRB Antibody (Center) - 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:[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 '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**

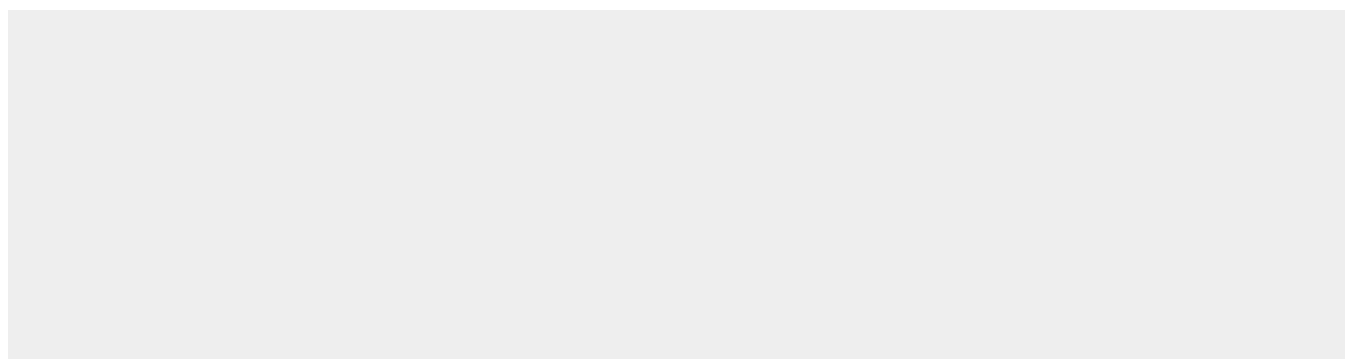
Predominantly expressed in liver and erythrocytes (PubMed:[7929092](#)). At lower levels in heart, lung, adrenal gland and cerebrum (PubMed:[7929092](#)). Expressed in adult red blood cells (PubMed:[29932944](#)).

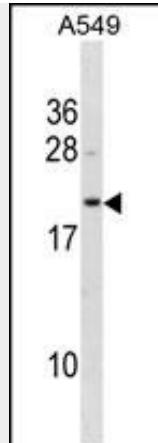
#### **BLVRB Antibody (Center) - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **BLVRB Antibody (Center) - Images**





BLVRB Antibody (Center) (Cat. #AP20044c) western blot analysis in A549 cell line lysates (35ug/lane). This demonstrates the BLVRB antibody detected the BLVRB protein (arrow).

#### **BLVRB Antibody (Center) - Background**

The final step in heme metabolism in mammals is catalyzed by the cytosolic biliverdin reductase enzymes A and B (EC 1.3.1.24).

#### **BLVRB Antibody (Center) - References**

Persson, B., et al. Chem. Biol. Interact. 178 (1-3), 94-98 (2009) :  
Smith, L.J., et al. Biochem. J. 411(3):475-484(2008)  
Otterbein, L.E., et al. Trends Immunol. 24(8):449-455(2003)  
Wang, J., et al. J. Biol. Chem. 278(22):20069-20076(2003)  
Pereira, P.J., et al. Nat. Struct. Biol. 8(3):215-220(2001)