



## Rabbit Anti-Biliverdin Reductase antibody

SL12868R

<b>Product Name:</b>	Biliverdin Reductase
<b>Chinese Name:</b>	胆绿素还原酶抗体
<b>Alias:</b>	Biliverdin Reductase; Biliverdin IX alpha reductase; Biliverdin reductase A; BLVR A; BLVR; BLVRA; BVR A; BVR; BVRA; zinc-metalloprotein; BIEA_HUMAN.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Pig,
<b>Applications:</b>	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1µg/TestICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	33kDa
<b>Cellular localization:</b>	cytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human BLVRA/Biliverdin Reductase:161-260/296
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	In human liver cytosolic fractions, four forms of biliverdin reductase have been identified, including two biliverdin-IX Beta reductases and two biliverdin-IX Alpha reductases, designated isozymes I and II and isozymes III and IV, respectively. Biliverdin reductase A (BLVRA), also designated biliverdin-IX Alpha-reductase, belongs to the GFO/iIDH/MocA family and the biliverdin reductase subfamily. The gene

that encodes this cytoplasmic protein maps to chromosome 7p14-cen. BLVRA reduces biliverdin IX  $\alpha$  (the  $\alpha$ -methene bridge of the open tetrapyrrole) to bilirubin with the concomitant oxidation of an NADH or NADPH cofactor (bilirubin + NADP<sup>+</sup> = biliverdin + NADPH). BLVRA is expressed primarily in liver.

**Function:**

Biliverdin Reductase (BVR) catalyzes the final step in the heme metabolic pathway, the reduction of biliverdin IX  $\alpha$  to bilirubin, with the concomitant oxidation of a NADH or NADPH cofactor. The enzyme remains unique among all biological catalysts described to date in having a dual pH/cofactor-dependent activity profile. Human biliverdin reductase (hBVR) has been recently shown to be a Ser/Thr/Tyr kinase in the MAPK insulin/insulin-like growth factor 1 (IGF1)-signaling cascade. BVR together with its substrate, biliverdin, and product, bilirubin, have recently been revealed to be important players in cellular signal transduction pathways, gene expression and oxidative response. These features make BVR unusually interesting and unique among all enzymes characterized to date.

**Subunit:**

Monomer.

**Subcellular Location:**

Cytoplasmic

**Tissue Specificity:**

Liver.

**DISEASE:**

Defects in BLVRA are the cause of hyperbiliverdinemia (HBLVD) [MIM:614156]. HBLVD is a condition characterized by a green discoloration of the skin, urine, serum, and other bodily fluids. It is due to increased biliverdin resulting from inefficient conversion to bilirubin. Affected individuals appear to have symptoms only in the context of obstructive cholestasis and/or liver failure. In some cases, green jaundice can resolve after resolution of obstructive cholestasis.

**Similarity:**

Belongs to the Gfo/Idh/MocA family. Biliverdin reductase subfamily.

**SWISS:**

P53004

**Gene ID:**

644

**Database links:**

[Entrez Gene: 644](#) Human

[Entrez Gene: 109778](#)Mouse

[Entrez Gene: 116599](#)Rat

[Oimim: 109750](#)Human

[SwissProt: P53004](#)Human

[SwissProt: Q9CY64](#)Mouse

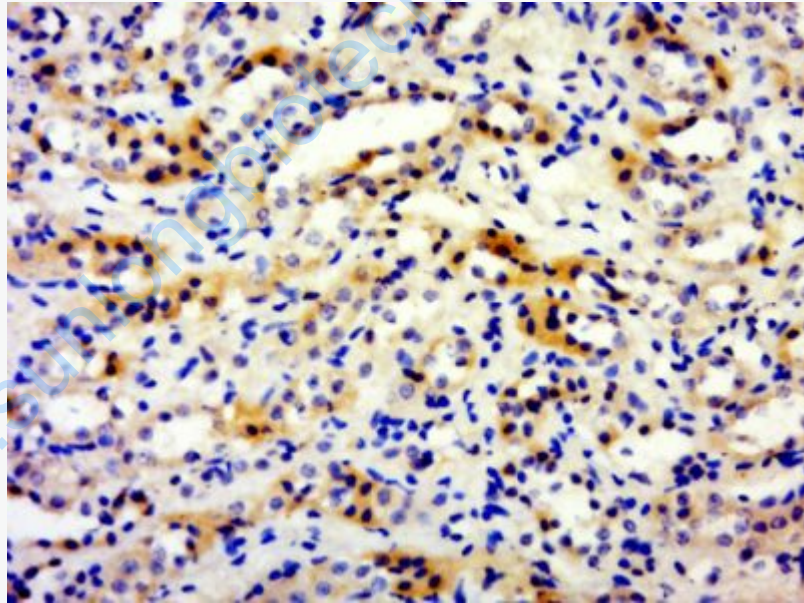
[SwissProt: P46844](#)Rat

[Unigene: 488143](#)Human

**Important Note:**

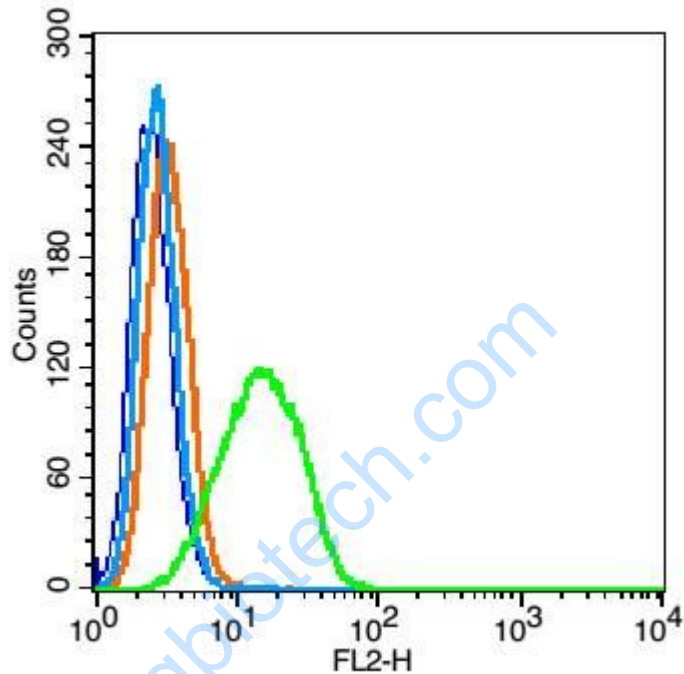
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**Picture:**



Paraformaldehyde-fixed, paraffin embedded (rat kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Biliverdin) Polyclonal Antibody, Unconjugated (SL12868R) at 1:500 overnight at 4°C, followed by a conjugated

secondary (sp-0023) for 20 minutes and DAB staining.



Blank control(blue):Hepg2 cells (fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 30 min on ice).

Primary Antibody:Rabbit Anti- Biliverdin Reductase antibody(SL12868R), Dilution: 1 $\mu$ g in 100  $\mu$ L 1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions );

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.