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Biliverdin Reductase Rabbit pAb

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Catalog # AP55006

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P53004
Reactivity	Human, Rat
Predicted	Mouse, Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	33428
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BLVRA/Biliverdin Reductase
Epitope Specificity	161-260/296
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic
SIMILARITY	Belongs to the Gfo/Idh/MocA family. Biliverdinreductase subfamily.
SUBUNIT	Monomer.
DISEASE	Defects in BLVRA are the cause of hyperbiliverdinemia(HBLVD) [MIM:614156]. HBLVD is a condition characterized by a greendiscoloration of the skin, urine, serum, and other bodily fluids.It is due to increased biliverdin resulting from inefficientconversion to bilirubin. Affected individuals appear to havesymptoms only in the context of obstructive cholestasis and/orliver failure. In some cases, green jaundice can resolve afterresolution of obstructive cholestasis.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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 ?(the ?methene bridge of the open tetrapyrrole) to bilirubin with the concomitant oxidation of an NADH or NADPH cofactor (bilirubin + NADP+ = biliverdin + NADPH). BLVRA is expressed primarily in liver.

Additional Information

Gene ID	644

Other Names	Biliverdin reductase A, BVR A, 1.3.1.24, Biliverdin-IX alpha-reductase, BLVRA (HGNC:1062)
Target/Specificity	Liver.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 μg/Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

Protein Information

Name	BLVRA (HGNC:1062)
Function	Reduces the gamma-methene bridge of the open tetrapyrrole, biliverdin IXalpha, to bilirubin with the concomitant oxidation of a NADH or NADPH cofactor (PubMed:10858451, PubMed:7929092, PubMed:8424666, PubMed:8631357). Does not reduce bilirubin IXbeta (PubMed:10858451). Uses the reactants NADH or NADPH depending on the pH; NADH is used at the acidic pH range (6-6.9) and NADPH at the alkaline range (8.5-8.7) (PubMed:7929092, PubMed:8424666, PubMed:8631357). NADPH, however, is the probable reactant in biological systems (PubMed:7929092).
Cellular Location	Cytoplasm, cytosol
Tissue Location	Liver.

Background

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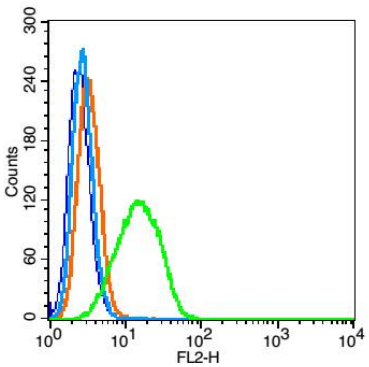
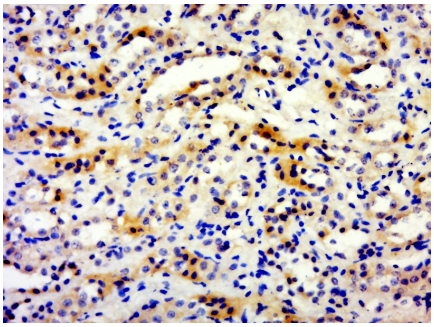
Images

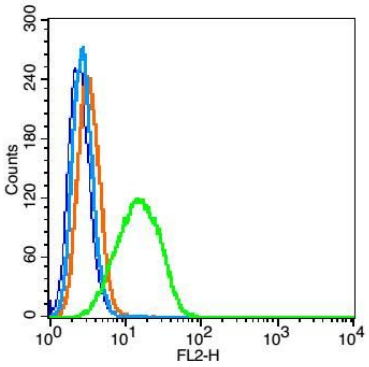


Blank control(blue):Hepg2 cells (fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 30 min on ice). Primary Antibody:Rabbit Anti- Biliverdin Reductase antibody(AP55006), Dilution: 1 μg in 100 μL 1X PBS containing 0.5% BSA; Isotype Control Antibody: Rabbit IgG(orange) ,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.

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 (AP55006) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



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