

# BLVRA (L-17): sc-32178

## BACKGROUND

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 7p13. BLVRA reduces biliverdin IX  $\alpha$  (the  $\gamma$ -methene bridge of the open tetra-pyrrole) to bilirubin with the concomitant oxidation of an NADH or NADPH cofactor (bilirubin + NADP<sup>+</sup> = biliverdin + NADPH). BLVRA is expressed primarily in liver.

## REFERENCES

1. Bonkovsky, H.L., et al. 1990. Purification and characterization of heme oxygenase from chick liver. Comparison of the avian and mammalian enzymes. *Eur. J. Biochem.* 189: 155-166.
2. Frydman, J., et al. 1990. Identification of the amino acid residues essential for the activity and the interconversion of the molecular forms of biliverdin reductase. *Biochim. Biophys. Acta* 1040: 119-129.
3. Maines, M.D., et al. 1993. Purification and characterization of human biliverdin reductase. *Arch. Biochem. Biophys.* 300: 320-326.
4. Yamaguchi, T., et al. 1994. Biliverdin-IX  $\alpha$ -reductase and biliverdin-IX  $\beta$ -reductase from human liver. Purification and characterization. *J. Biol. Chem.* 269: 24343-24348.
5. SWISS-PROT/TrEMBL (P53004). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: BLVRA (human) mapping to 7p13; Blvra (mouse) mapping to 2 F1.

## SOURCE

BLVRA (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BLVRA of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32176 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

BLVRA (L-17) is recommended for detection of Biliverdin reductase A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BLVRA (L-17) is also recommended for detection of Biliverdin reductase A in additional species, including equine, canine, bovine and porcine

Suitable for use as control antibody for BLVRA siRNA (h): sc-44650, BLVRA siRNA (m): sc-44651, BLVRA shRNA Plasmid (h): sc-44650-SH, BLVRA shRNA Plasmid (m): sc-44651-SH, BLVRA shRNA (h) Lentiviral Particles: sc-44650-V and BLVRA shRNA (m) Lentiviral Particles: sc-44651-V.

Molecular Weight of BLVRA: 37 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.


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 Satisfation  
 Guaranteed

Try **BLVRA (F-1): sc-393385** or **BLVRA (2E4): sc-100511**, our highly recommended monoclonal alternatives to BLVRA (L-17).