

## BLVRA Human

**Description:**BLVRA Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 295 amino acids (3-296 a.a. and Methionine at N-terminus) and having a molecular mass of 33.3kDa (molecular weight on SDS-PAGE will shift up).The BLVRA is purified by proprietary chromatographic techniques.

**Catalog #:**ENPS-453

For research use only.

**Synonyms:**Biliverdin reductase A, BVR A, Biliverdin-IX alpha-reductase, BLVRA, BLVR, BVR, BVRA.

**Source:**Escherichia Coli.

**Physical Appearance:**Sterile Filtered colorless solution.

**Amino Acid Sequence:**MAEPERKFGV VVGVGRAGS VRMRDLRNPH PSSAFLNLIG  
FVSRRELGS DGVQQISLED ALSSQEVEVA YICSESSSHE DYIRQFLNAG KHVLEVEYPM  
LSLAAQELW ELAEQKGKVL HEEHVLLME EFAFLKKEVV GKDLLKGSLL FTAGPLEEER  
FGFPAFSGIS RLTWLVSLFGELSLVSATLE ERKEDQYMKM TVCLETEKKS PLSWIEEKGP  
GLKRNRYLSF HFK

**Purity:**Greater than 90.0% as determined by SDS-PAGE.

**Formulation:**

The BLVRA solution contains 20mM Tris-HCl buffer (pH8.0) and 10% glycerol.

**Stability:**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

Biliverdin reductase A (BLVRA) is a member of the gfo/idh/mocA family. BLVRA is an enzyme that converts biliverdin to bilirubin, converting a double-bond between the second and third pyrrole ring into a single-bond. BLVRA reduces the gamma-methene bridge of the open tetrapyrrole, biliverdin IX alpha, to bilirubin with the simultaneous oxidation of a NADH or NADPH cofactor (Bilirubin + NAD(P)<sup>+</sup> = biliverdin + NAD(P)H ).BLVRA is a regulator for induction of activating transcription factor-2 and heme oxygenase-1. Furthermore, BLVRA enhances the role of HO-1 in cytoprotection and provides cytoprotection independent of heme degradation. In addition, Bilirubin while acting as a cytoprotective antioxidant is itself oxidized to biliverdin and subsequently recycled by biliverdin reductase back to bilirubin.

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