## **PRODUCT INFORMATION**

Expression system E.coli

**Domain** 1-322aa

**UniProt No.** P05089

NCBI Accession No. NP\_000036

#### **Alternative Names**

Arginase-1 liver, Arginase-1, liver, Arginase-1, liver A I, AI, ARG 1, ARG1, Arginase 1, Arginase liver, Arginase type I, Arginase1, Liver type arginase, Type I arginase.

## **PRODUCT SPECIFICATION**

#### **Molecular Weight**

35.8 kDa (330aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by Bradford assay)

#### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 2mM DTT, 100mM NaCl

Purity > 85% by SDS-PAGE

#### **Biological Activity**

Specific activity is > 150,000 pmol/min/ug, and is defined as the amount of enzyme that hydrolyze 1.0 pmole of arginine to urea per minute at pH 10.5 at 37C.

# Tag

His-Tag

**Application** SDS-PAGE, Enzyme Activity

#### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

#### Description

Arginase is a manganese-containing enzyme which catalyzes the hydrolysis of arginine to ornithine and urea. It is the final enzyme of the urea cycle. At least two isoforms of mammalian arginase exist (types I and II) which



differ in their tissue distribution, subcellular localization, immunologic crossreactivity and physiologic function. The type I isoform functions in the urea cycle, and is located primarily in the cytoplasm of the liver. The type II isoform has been implicated in the regulation of the arginine/ornithine concentrations in the cell. It is located in mitochondria of several tissues in the body, with most abundance in the kidney and prostate. Recombinant human ARG1, fused to His-tag at C-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

#### **Amino acid Sequence**

MSAKSRTIGI IGAPFSKGQP RGGVEEGPTV LRKAGLLEKL KEQECDVKDY GDLPFADIPN DSPFQIVKNP RSVGKASEQL AGKVAEVKKN GRISLVLGGD HSLAIGSISG HARVHPDLGV IWVDAHTDIN TPLTTTSGNL HGQPVSFLLK ELKGKIPDVP GFSWVTPCIS AKDIVYIGLR DVDPGEHYIL KTLGIKYFSM TEVDRLGIGK VMEETLSYLL GRKKRPIHLS FDVDGLDPSF TPATGTPVVG GLTYREGLYI TEEIYKTGLL SGLDIMEVNP SLGKTPEEVT RTVNTAVAIT LACFGLAREG NHKPIDYLNP PK<LEHHHHHH>

#### **General References**

Wu G., et al (1998) The Biochemical journal 336 (Pt 1): 1-17. Iyer RK., et al (2002) Molecular and cellular biology 22 (13): 4491-8.

## DATA

#### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.