Human ARG1 / Arginase 1 Protein (His Tag)

Catalog Number: **11558-H08H**

General Information

Gene Name Synonym:

ARG1

Protein Construction:

A DNA sequence encoding the human ARG1 isoform 1 (P05089-1) (Met 1-Lys 322) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by the production of urea during the hydrolysis of arginine. The specific activity is >35,000 pmoles/min/μg.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met 1

Molecular Mass:

The secreted recombinant human ARG1 consists of 333 amino acids and has a calculated molecular mass of 36.2 kDa. The apparent molecular mass of the protein is approximately 40 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 150mM NaCl, 20% Glycerol, 1mM DTT, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

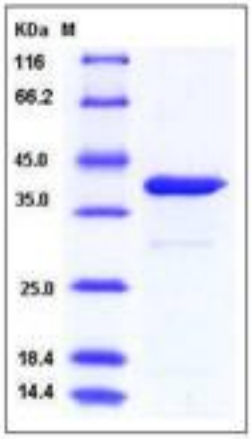
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Arginase is the focal enzyme of the urea cycle hydrolysing L-arginine to urea and L-ornithine. Emerging studies have identified arginase in the vasculature and have implicated this enzyme in the regulation of nitric oxide (NO) synthesis and the development of vascular disease. Arginase also redirects the metabolism of L-arginine to L-ornithine and the formation of polyamines and L-proline, which are essential for smooth muscle cell growth and collagen synthesis. Arginase is encoded by two recently discovered genes (Arginase I and Arginase II). In most mammals, Arginase 1 (ARG1) also known as Arginase, liver, which functions in the urea cycle, and is located primarily in the cytoplasm of the liver. The second isozyme, Arginase II, 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. It may be found at lower levels in macrophages, lactating mammary glands, and brain.

References

1.Durante W, *et al.* (2007) Arginase: a critical regulator of nitric oxide synthesis and vascular function. Clin Exp Pharmacol Physiol. 34(9): 906-11. 2.Waddington SN. (2002) Arginase in glomerulonephritis. Kidney Int. 61(3): 876-81. 3.Morris SM. (2002). Regulation of enzymes of the urea cycle and arginine metabolism. Annual review of nutrition. 22 (1): 87-105.