Active Arginase (ARG)

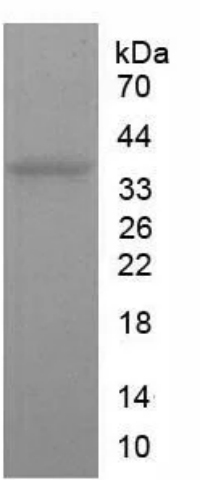
Catalog#:PEH12610

概述（Summary）

别称（Alternative Names）	ARG1; Arginase I; Liver Arginase
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Met1-Lys322】
Accession #	P05089
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	36.9 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Key element of the urea cycle converting L-arginine to urea and L-ornithine, which is further metabolized into metabolites proline and polyamides that drive collagen synthesis and bioenergetic pathways critical for cell proliferation, respectively; the urea cycle takes place primarily in the liver and, to a lesser extent, in the kidneys.; Functions in L-arginine homeostasis in nonhepatic tissues characterized by the competition between nitric oxide synthase (NOS) and arginase for the available intracellular substrate arginine. Arginine metabolism is a critical regulator of innate and adaptive immune responses. Involved in an antimicrobial effector pathway in polymorphonuclear granulocytes (PMN). Upon

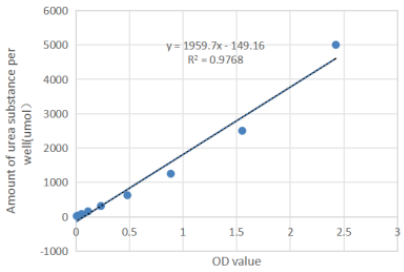
PMN cell death is liberated from the phagolysosome and depletes arginine in the microenvironment leading to suppressed T cell and natural killer (NK) cell proliferation and cytokine secretion. In group 2 innate lymphoid cells (ILC2s) promotes acute type 2 inflammation in the lung and is involved in optimal ILC2 proliferation but not survival. In humans, the immunological role in the monocytic/macrophage/dendritic cell (DC) lineage is unsure.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



OD Value	amount of urea per well(umol)
2.4247	5000
1.5516	2500
0.8855	1250
0.4804	625
0.234	312.5
0.1133	156.25
0.0527	78.125
0.0277	39.0625
0.008	19.53125

Figure 1. The standard curve of the amount of urea

$$\text{Specific Activity (pmol/min/µg)} = \frac{\text{Adjusted Urea Detected* (oD)}}{\text{Incubation time (min) x amount of enzyme (µg)}}$$

*Derived from the urea standard curve using linear or 4-parameter fitting and adjusted for Substrate Blank

Arginase (ARG) is a kind of inducible manganese (Mn2)-containing enzymes that catalyse the final step of the urea cycle in the liver, converting l -arginine into l -ornithine and urea.Therefore, we can measure its bioactivity by enzyme activity assay. Recombinant human Arg was diluted to different concentrations in deionized water.Loading 40 µL of the rhARG1 and 10ul Substrate mixture(100 mM Arginine, 500 mM Glycine, 1.25 mM MnCl2, pH 10.5) into the plate. Incubated at 37 °C for 2 hours and stop the reaction with 200 µL stop solution of the 2 mM oPA, 2 mM NED ,50 mM Boric Acid, 1 M Sulfuric Acid, 0.03% Brij-35 (w/v) .Cover the plate and incubate at room temperature for 20 minutes and read at 520 nm (absorbance) in endpoint mode. The specific activity of recombinant human ARG is >24400pmol/min/ug.

注意事项（Note）

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