Arginase Assay Kit

Catalog # KA1609 Size 1 Kit

Specification

Product Description	Arginase Assay Kit is a quantitative colorimetric arginase determination.
Sample Volume	40 uL
Detection Method	Colorimetric
Assay Type	Quantitative
Limit of Detection	0.3 U/L
Regulation Status	For research use only (RUO)
Storage Instruction	Store Arginine Buffer and Urea Standard at -20°C. Store other components at 4°C.

Applications

- Functional Study

Publication Reference

- Blockade of Cycloxygenase-2 ameliorates sepsis induced immune-suppression by regulating myeloid-derived suppressor cells.

  Jiajun Chen, Shiqi Cai, Renjie Li, Jie Xie, Fan Yang, Tao Liu.

  International Immunopharmacology 2022 Mar; 104:108506.

  Application: Enzyme, Mouse, Cell culture supernatant

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- Preparation of liposomes containing IFN-gamma and their potentials in cancer immunotherapy: In vitro and in vivo studies in a colon cancer mouse model.

  Maryam Kateh Shamshiri, Mahmoud Reza Jaafari, Ali Badiee.

  Life Sciences 2021 Jan; 264:118605.

  Application: Enzyme, Mouse, J774.1 cells

- Autophagic adaptation to oxidative stress alters peritoneal residential macrophage survival and ovarian cancer metastasis.

  Houjun Xia, Shasha Li, Xiong Li, Weichao Wang, Yingjie Bian, Shuang Wei, Sara Grove, Weimin Wang, Linda Vatan, J Rebecca Liu, Karen McLean, Ramandeep Rattan, Adnan R Munkarah, Jun-Lin Guan, Ilona Kryczek, Weiping Zou.

  JCI Insight 2020 Sep; 5(18):141115.

  Application: Func, Quant, Human, Human tumor-associated macrophages

- Stem cell factor produced by tumor cells expands myeloid-derived suppressor cells in mice.

  Wei-Chen Lee, Pao-Yueh Hsu, Hsiu-Ying Hsu.

  Scientific Reports 2020 Jul; 10(1):11257.

  Application: Func, Mouse, Mouse myeloid-derived suppressor cells, Mouse splenocytes

- Myeloid-derived Suppressor Cells Exert Immunosuppressive Function on the T Helper 2 in Mice Infected With Echinococcus Granulosus.

  Xiaojing Zhou, Wen Wang, Fang Cui, Chunli Shi, Xiaoping Gao, Jiaxin Ouyang, Yuxin Wang, Atsushi Nagai, Wei Zhao, Mei Yin, Jiaqing Zhao.

  Experimental Parasitology 2020 May; 215:107917.

  Application: Func, Mouse, MDSCs

- Downregulation of macrophage Irs2 by hyperinsulinemia impairs IL-4-indeuced M2a-subtype macrophage activation in obesity.

  Kubota T, Inoue M, Kubota N, Takamoto I, Mineyama T, Iwayama K, Tokuyama K, Moroi M, Ueki K, Yamauchi T, Kadowaki T.

  Nature Communications 2018 Nov; 9(1):4863.

  Application: Func, Mouse, BMDM cells

- Fibronectin aggregates promote features of a classically and alternatively activated phenotype in macrophages.

  Sikkema AH, Stoffels JMJ, Wang P, Basedow FJ, Bulsink R, Bajramovic JJ, Baron W.

  Journal of Neuroinflammation 2018 Aug; 15(1):218.

  Application: Func, Rat, Bone marrow-derived macrophages

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- Arginase 2 Suppresses Renal Carcinoma Progression via Biosynthetic Cofactor Pyridoxal Phosphate Depletion and Increased Polyamine Toxicity.

  Ochocki JD, Khare S, Hess M, Ackerman D, Qiu B, Daisak JI, Worth AJ, Lin N, Lee P, Xie H, Li B, Wubbenhorst B, Maguire TG, Nathanson KL, Alwine JC, Blair IA, Nissim I, Keith B, Simon MC.

  Cell Metabolism 2018 Jun; 27(6):1263.

  Application: Func, Human, Supernatants from 786-O ccRCC, 786-O ccRCC-ARG2 wild-type, 786-O ccRCC-ARG2 H160F cells lysed

- Myeloid-specific knockout of NFI-A improves sepsis survival.

  McPeak MB, Youssef D, Williams DA, Pritchett C, Yao ZQ, McCall CE, El Gazzar M.

  Infection and Immunity 2017 Mar; 85(4).

  Application: Quant, Mouse, Mouse Gr1+CD11b+ cells

- Methods to Evaluate the Preclinical Safety and Immunogenicity of Genetically Modified Live-Attenuated Leishmania Parasite Vaccines.

  Gannavaram S, Bhattacharya P, Dey R, Ismail N, Avishek K, Salotra P, Selvapandiyan A, Satoskar A, Nakhasi HL.

  Methods in Molecular Biology (Clifton, N.J.) 2016 Apr; 1403:623.

  Application: Quant, Mouse, Mouse macrophages

- Unique immunomodulatory effect of paeoniflorin on type I and II macrophages activities.

  Zhai T, Sun Y, Li H, Zhang J, Huo R, Li H, Shen B, Li N.

  Journal of Pharmacological Sciences 2016 Mar; 130(3):143.

  Application: Func, Mouse, Mouse macrophages

- Modulation and Apoptosis of Neutrophil Granulocytes by Extracorporeal Photopheresis in the Treatment of Chronic Graft-Versus-Host Disease.

  Franklin C, Cesko E, Hillen U, Schilling B, Brandau S.

  PloS One 2015 Aug; 10(8):e0134518.

  Application: Func, Human, Neutrophil supernatants

- Granulocyte Macrophage Colony-Stimulating Factor-Activated CD39+/CD73+ Murine Monocytes Modulate Intestinal Inflammation via Induction of Regulatory T Cells.

  Weinhage T, Däbritz J, Brockhausen A, Wirth T, Brückner M, Belz M, Foell D, Varga G.

  Cellular and Molecular Gastroenterology and Hepatology 2015 May; 1(4):433.

  Application: Func, Mouse, GM-CSF-activated monocytes, Monocytes

- Arginase 1 activity worsens lung protective immunity against Streptococcus pneumoniae infection.

  Knippenberg S, Brumshagen C, Aschenbrenner F, Welte T, Maus UA.

  European Journal of Immunology 2015 Jun; 45(6):1716.

  Application: Func, Mouse, BAL cells

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- Dietary nitrate increases arginine availability and protects mitochondrial complex I and energetics in the hypoxic rat heart.

  Ashmore T, Fernandez BO, Branco-Price C, West JA, Cowburn AS, Heather LC, Griffin JL, Johnson RS, Feelisch M, Murray AJ.

  The Journal of Physiology 2014 Nov; 592(Pt 21):4715.

  Application: Func, Rat, Supernatant from cardiac extracts

- Hypobaric hypoxia induced arginase expression limits nitric oxide availability and signaling in rodent heart.

  Singh M, Padhy G, Vats P, Bhargava K, Sethy NK.

  Biochimica et Biophysica Acta 2014 Jun; 1840(6):1817.

  Application: Func, Rat, Plasma, Heart extracted

- Mesenchymal Stem Cells Tune the Development of Monocyte-Derived Dendritic Cells Toward a Myeloid-Derived Suppressive Phenotype through Growth-Regulated Oncogene Chemokines.

  Chen HW, Chen HY, Wang LT, Wang FH, Fang LW, Lai HY, Chen HH, Lu J, Hung MS, Cheng Y, Chen MY, Liu SJ, Chong P, Lee OK, Hsu SC.

  Journal of Immunology 2013 May; 190(10):5065.

  Application: Func, Mouse, Mouse myeloid-derived suppressor cell

- Myeloid-derived suppressor cells evolve during sepsis and can enhance or attenuate the systemic inflammatory response.

  Brudecki L, Ferguson DA, McCall CE, El Gazzar M.

  Infection and Immunity 2012 Jun; 80(6):2026.

  Application: Quant, Mouse, Mouse myeloid-derived suppressor cells

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