

PRODUCT INFORMATION



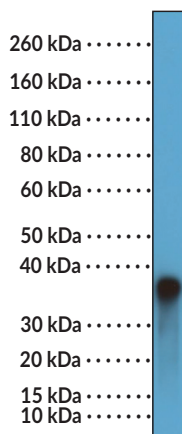
ARG1 (C-Term) Rabbit Monoclonal Antibody (Clone RM377)

Item No. 32302

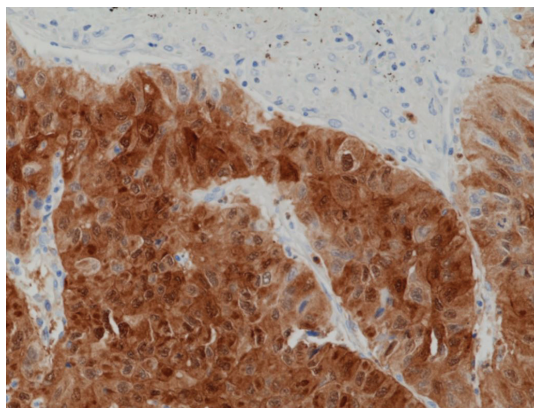
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Arginase 1, Liver-type Arginase, Type I Arginase
Immunogen:	Peptide from the C-terminal region of ARG1
Cross Reactivity:	(+) ARG1
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM377
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:1,000-1:2,000 for IHC and 1:5,000-1:10,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of human liver tissue lysate using ARG1 (C-Term) Rabbit Monoclonal Antibody (Clone RM377) at a dilution of 1:10,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human liver cancer tissue using ARG1 (C-Term) Rabbit Monoclonal Antibody (Clone RM377) at a dilution of 1:1,250.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Arginase 1 (ARG1) is a manganese-metalloenzyme that catalyzes the irreversible hydrolysis of L-arginine into urea and L-ornithine with roles in polyamine synthesis and tissue repair.¹⁻³ It functions as a homotrimer with each subunit containing a binuclear manganese cluster at its active site.² ARG1 is expressed primarily in the liver, and at lower levels in various extrahepatic tissues, including the heart, lung, intestine, and stomach, as well as the CNS, blood vessels, and M2 macrophages.¹ Loss-of-function mutations in ARG1 are associated with the autosomal recessive disorder arginase-1 deficiency that is characterized by neurological impairment, growth retardation, spastic paraparesis, and hyperargininemia.² ARG1 expression is increased in lung homogenates isolated from patients with asthma.⁴ Cayman's ARG1 (C-Term) Rabbit Monoclonal Antibody (Clone RM377) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Moretto, J., Girard, C., and Demougeot, C. The role of arginase in aging: A systematic review. *Exp. Gerontol.* **116**, 54-73 (2019).
2. Sin, Y.Y., Baron, G., Schulze, A., *et al.* Arginase-1 deficiency. *J. Mol. Med. (Berl.)* **93(12)**, 1287-1296 (2015).
3. Greenhalgh, A.D., Passos Dos Santos, R., Zarruk, J.G., *et al.* Arginase-1 is expressed exclusively by infiltrating myeloid cells in CNS injury and disease. *Brain Behav. Immun.* **56**, 61-67 (2016).
4. North, M.L., Khanna, N., Marsden, P.A., *et al.* Functionally important role for arginase 1 in the airway hyperresponsiveness of asthma. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296(6)**, L911-L920 (2009).

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