

**KD-Validated Anti-Arg2 Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI2376****Specification****KD-Validated Anti-Arg2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<a href="#">P78540</a>
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 39 kDa; Observed, 39 kDa kDa
Gene Name	ARG2
Aliases	ARG2; Arginase 2; Arginase-2, Mitochondrial; Kidney-Type Arginase; Non-Hepatic Arginase; Arginase, Type II; Type II Arginase; Arginase II; EC 3.5.3.1; L-Arginine Amidinohydrolase; L-Arginine Ureahydrolase; Nonhepatic Arginase; Kidney Arginase; EC 3.5.3
Immunogen	A synthesized peptide derived from human Arg2

**KD-Validated Anti-Arg2 Rabbit Monoclonal Antibody - Additional Information**

Gene ID	384
<b>Other Names</b>	
Arginase-2, mitochondrial, 3.5.3.1, Arginase II, Kidney-type arginase, Non-hepatic arginase, Type II arginase, ARG2	

**KD-Validated Anti-Arg2 Rabbit Monoclonal Antibody - Protein Information****Name** ARG2**Function**

May play a role in the regulation of extra-urea cycle arginine metabolism and also in down-regulation of nitric oxide synthesis. Extrahepatic arginase functions to regulate L-arginine bioavailability to nitric oxid synthase (NOS). Arginine metabolism is a critical regulator of innate and adaptive immune responses. Seems to be involved in negative regulation of the survival capacity of activated CD4(+) and CD8(+) T cells (PubMed:<a href="http://www.uniprot.org/citations/27745970" target="\_blank">27745970</a>). May suppress inflammation- related signaling in asthmatic airway epithelium (PubMed:<a href="http://www.uniprot.org/citations/27214549" target="\_blank">27214549</a>). May contribute to the immune evasion of H.pylori by restricting M1 macrophage activation and polyamine metabolism (By similarity). In fetal dendritic cells may play a role in promoting immune suppression and T cell TNF-alpha production during gestation (PubMed:<a href="http://www.uniprot.org/citations/28614294" target="\_blank">28614294</a>). Regulates RPS6KB1 signaling, which promotes endothelial cell senescence and inflammation and implicates

NOS3/eNOS dysfunction (PubMed:<a href="http://www.uniprot.org/citations/22928666" target="\_blank">22928666</a>). Can inhibit endothelial autophagy independently of its enzymatic activity implicating mTORC2 signaling (PubMed:<a href="http://www.uniprot.org/citations/25484082" target="\_blank">25484082</a>). Involved in vascular smooth muscle cell senescence and apoptosis independently of its enzymatic activity (PubMed:<a href="http://www.uniprot.org/citations/23832324" target="\_blank">23832324</a>). Since NOS is found in the penile corpus cavernosum smooth muscle, the clitoral corpus cavernosum and the vagina, arginase-2 plays a role in both male and female sexual arousal (PubMed:<a href="http://www.uniprot.org/citations/12859189" target="\_blank">12859189</a>).

### Cellular Location

Mitochondrion.

### Tissue Location

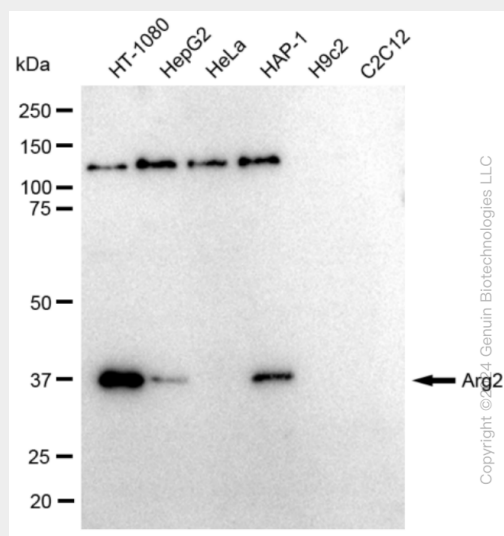
Expressed most strongly in kidney and prostate, much less strongly in the brain, skeletal muscle, placenta, lung, mammary gland, macrophage, uterus, testis and gut, but apparently not in the liver, heart and pancreas. Expressed in activated T cells (PubMed:27745970).

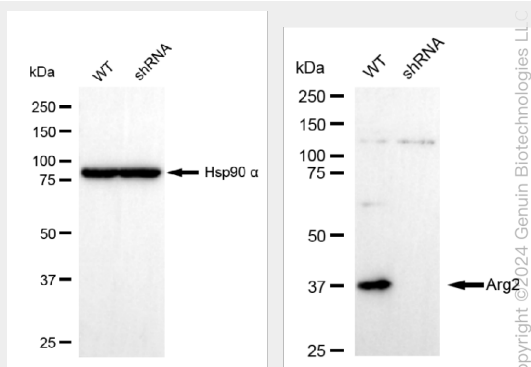
## KD-Validated Anti-Arg2 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

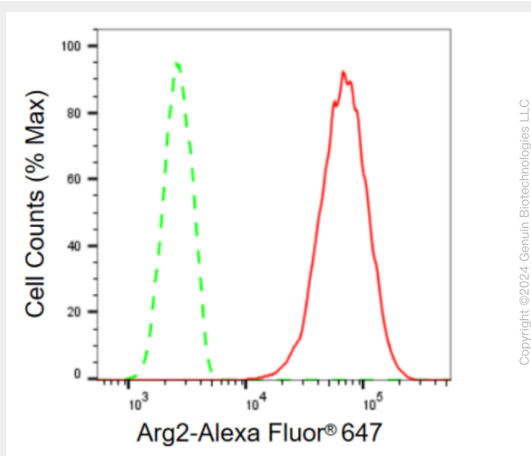
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## KD-Validated Anti-Arg2 Rabbit Monoclonal Antibody - Images

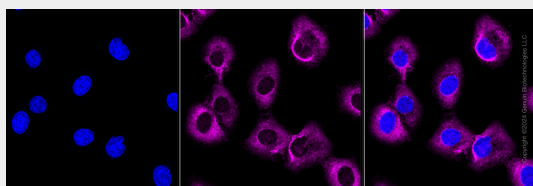




Western blotting analysis using anti-Arg2 antibody (Cat#AGI2376). Arg2 expression in wild type (WT) and Arg2 shRNA knockdown (KD) HT-1080 cells with 30  $\mu$ g of total cell lysates. GAPDH serves as a loading control. The blot was incubated with anti-Arg2 antibody (Cat#AGI2376, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Arg2 expression in HT-1080 cells using Arg2 antibody (Cat#AGI2376, 1:2,000). Green, isotype control; red, Arg2.



Immunocytochemical staining of HT-1080 cells with Arg2 antibody (Cat#AGI2376, 1:1,000). Nuclei were stained blue with DAPI; Arg2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20  $\mu$ m.