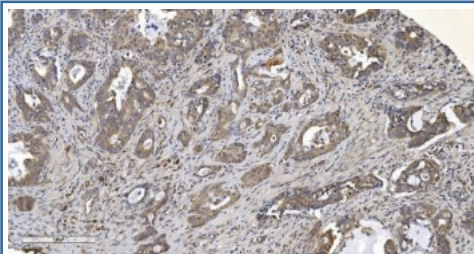


## ARG2 Antibody / Arginine Metabolism Antibody (RQ6348)

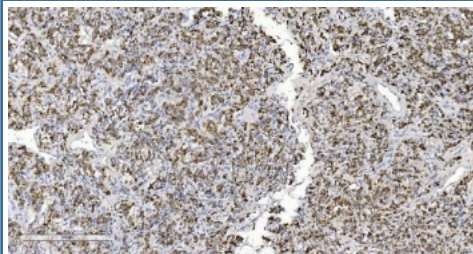
| Catalog No. | Formulation                                           | Size   |
|-------------|-------------------------------------------------------|--------|
| RQ6348      | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

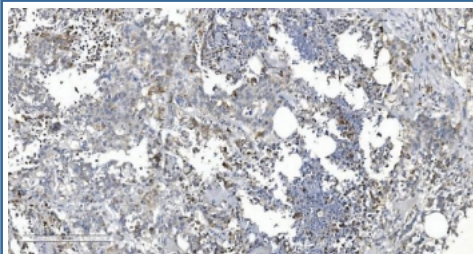
|                           |                                                                                                                                                                                    |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Availability</b>       | 1-3 business days                                                                                                                                                                  |
| <b>Species Reactivity</b> | Human, Mouse, Rat                                                                                                                                                                  |
| <b>Format</b>             | Purified                                                                                                                                                                           |
| <b>Host</b>               | Rabbit                                                                                                                                                                             |
| <b>Clonality</b>          | Polyclonal (rabbit origin)                                                                                                                                                         |
| <b>Isotype</b>            | Rabbit IgG                                                                                                                                                                         |
| <b>Purity</b>             | Antigen affinity purified                                                                                                                                                          |
| <b>Buffer</b>             | Lyophilized from 1X PBS with 2% Trehalose                                                                                                                                          |
| <b>UniProt</b>            | P78540                                                                                                                                                                             |
| <b>Applications</b>       | Western Blot : 0.5-1ug/ml<br>Immunohistochemistry (FFPE) : 2-5ug/ml<br>Immunofluorescence (FFPE) : 2-4ug/ml<br>Flow Cytometry : 1-3ug/million cells<br>Direct ELISA : 0.1-0.5ug/ml |
| <b>Limitations</b>        | This ARG2 Antibody / Arginine Metabolism Antibody is available for research use only.                                                                                              |



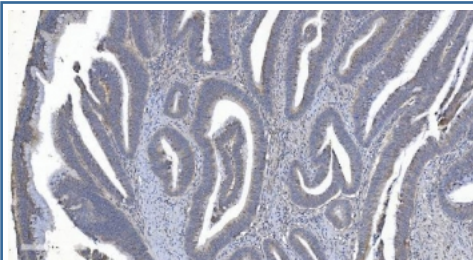
ARG2 Antibody Human Gallbladder Adenocarcinoma IHC. IHC staining of FFPE human gallbladder adenocarcinoma tissue using ARG2 Antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer (pH 8.0) for 20 minutes, followed by cooling prior to staining. Positive ARG2 staining is observed in tumor cells within the adenocarcinoma tissue. This ARG2 Antibody, also called an Arginine Metabolism Antibody, demonstrates ARG2 expression in human gallbladder adenocarcinoma and supports studies of arginine metabolism and tumor metabolic biology.



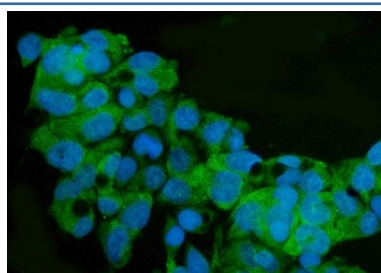
**ARG2 Antibody Human Adrenocortical Adenoma IHC.** IHC staining of FFPE human adrenocortical adenoma tissue using ARG2 Antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer (pH 8.0) for 20 minutes, followed by cooling prior to staining. Positive ARG2 staining is observed throughout the adenoma tissue. This ARG2 Antibody, also called an Arginine Metabolism Antibody, demonstrates ARG2 expression in human adrenocortical adenoma and supports studies of arginine metabolism and metabolic regulation in adrenal tissue.



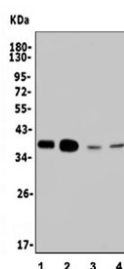
**ARG2 Antibody Human Pancreatic Cancer IHC.** IHC staining of FFPE human pancreatic cancer tissue using ARG2 Antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer (pH 8.0) for 20 minutes, followed by cooling prior to staining. Positive ARG2 staining is observed in tumor cells within the pancreatic cancer tissue. This ARG2 Antibody, also called an Arginine Metabolism Antibody, demonstrates ARG2 expression in human pancreatic cancer and supports studies of arginine metabolism and tumor metabolic biology.



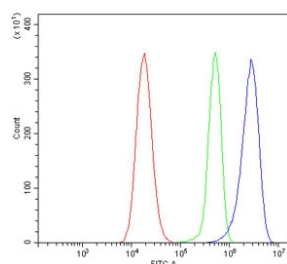
**ARG2 Antibody Human Rectal Cancer IHC.** IHC staining of FFPE human rectal cancer tissue using ARG2 Antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer (pH 8.0) for 20 minutes, followed by cooling prior to staining. ARG2 staining is observed in the tumor epithelium within the rectal cancer tissue. This ARG2 Antibody, also called an Arginine Metabolism Antibody, demonstrates ARG2 expression in human rectal cancer and supports studies of arginine metabolism and metabolic regulation in colorectal tumor biology.



**ARG2 Antibody HepG2 Cell IF.** Immunofluorescent staining of FFPE human HepG2 cells using ARG2 Antibody. Heat-induced epitope retrieval was performed by steaming in citrate buffer (pH 6.0) for 20 minutes. ARG2 staining is shown in green, with DAPI nuclear counterstaining in blue. Positive cytoplasmic ARG2 staining is observed in HepG2 cells. This ARG2 Antibody, also called an Arginine Metabolism Antibody, demonstrates ARG2 expression in human hepatic cells and supports studies of arginine metabolism and metabolic regulation.



**ARG2 Antibody Human, Mouse and Rat WB.** Western blot analysis of ARG2 in human HEK293 and SW620 cell lysates, rat brain tissue lysate and mouse kidney tissue lysate using ARG2 Antibody. Lane 1: HEK293; Lane 2: SW620; Lane 3: rat brain; Lane 4: mouse kidney. A specific band is detected at approximately 39 kDa, consistent with the expected molecular weight of ARG2. This ARG2 Antibody, also called an Arginine Metabolism Antibody, detects ARG2 across human, mouse and rat samples and supports studies of arginine metabolism and metabolic regulation.



**ARG2 Antibody 293T Cell FACS.** Flow cytometry analysis of human 293T cells using ARG2 Antibody at 1 ug/million cells. Cells were blocked with goat serum prior to staining. The histogram shows ARG2 staining (blue), isotype control (green) and unstained cells (red). A strong fluorescence shift is observed with ARG2 staining relative to the isotype control. This ARG2 Antibody, also called an Arginine Metabolism Antibody, detects ARG2 in human 293T cells by flow cytometry and supports studies of arginine metabolism and metabolic regulation.

## Description

ARG2 Antibody / Arginine Metabolism Antibody recognizes ARG2, a mitochondrial enzyme that catalyzes the hydrolysis

of L-arginine to ornithine and urea. ARG2 is one of two mammalian arginase isoforms and is also known as Arginase 2 or Arginase II. In contrast to the predominantly hepatic and cytosolic ARG1 isoform, ARG2 contains an N-terminal mitochondrial targeting sequence and is widely expressed in extrahepatic tissues, with particularly prominent expression in kidney. Its ability to regulate cellular L-arginine utilization places ARG2 at the intersection of amino acid metabolism, mitochondrial function and multiple signaling pathways influenced by arginine availability.

ARG2 competes for L-arginine with nitric oxide synthases, which use the same amino acid as a substrate for nitric oxide production. Changes in arginase activity can therefore alter the availability of L-arginine for nitric oxide synthesis. This relationship has been extensively investigated in vascular biology, where increased ARG2 activity may contribute to reduced nitric oxide bioavailability and altered endothelial function. An ARG2 Antibody can support studies examining the relationship between arginine metabolism, nitric oxide regulation, vascular homeostasis and metabolic stress.

ARG2-mediated production of ornithine also connects arginine utilization with downstream metabolic pathways. Ornithine can serve as a precursor for polyamine synthesis and proline production, linking arginase activity to cellular proliferation, tissue remodeling and extracellular matrix biology. These metabolic relationships extend the biological significance of ARG2 beyond urea formation and make the protein relevant to studies of nutrient utilization and metabolic adaptation. As an Arginine Metabolism Antibody target, ARG2 provides a useful means of investigating how changes in amino acid metabolism influence cellular physiology.

Arginine metabolism is also an important component of immune regulation and tumor biology. Availability of extracellular and intracellular arginine can influence immune cell activation, proliferation and effector function. ARG2 expression has been investigated in immune cell populations and in tumor-associated environments where altered nutrient utilization can affect interactions between malignant and immune cells. These relationships make ARG2 relevant to studies of immunometabolism, inflammatory signaling and metabolic mechanisms that contribute to tumor progression and immune regulation.

The mitochondrial localization and extrahepatic distribution of ARG2 distinguish it from ARG1 and provide opportunities to investigate compartment-specific regulation of L-arginine metabolism. Its connections to nitric oxide synthesis, ornithine production, vascular biology and immune cell metabolism make ARG2 relevant across metabolic, cardiovascular, immunological and cancer research. NSJ Bioreagents supplies antibodies to ARG2 and other proteins involved in amino acid metabolism. An ARG2 Antibody can support studies of arginine metabolism, mitochondrial function, nitric oxide regulation, immunometabolism and metabolic signaling.

For additional information on ARG2 and its roles in mitochondrial arginine metabolism, nitric oxide regulation and cellular metabolism, see our [Arginase 2 Antibody](#) page.

## Application Notes

Optimal dilution of the ARG2 Antibody / Arginine Metabolism Antibody should be determined by the researcher.

## Immunogen

Recombinant human protein (amino acids E43-A320) was used as the immunogen for the ARG2 antibody.

## Storage

After reconstitution, the ARG2 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.

## Alternate Names

ARG2 antibody, Arginine metabolism antibody, Arginase 2 antibody, Arginase II antibody, Mitochondrial arginase antibody, Kidney-type arginase antibody

