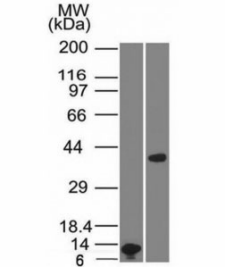
Arginase 1 Antibody Protein Microarray Validated / ARG1 Antibody [clone ARG1/1125] (V2651)

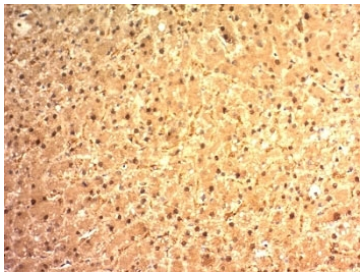
Catalog No.	Formulation	Size
V2651-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2651-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2651SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2651IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

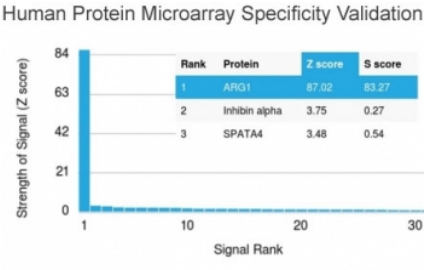
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG3, kappa
Clone Name	ARG1/1125
Purity	Protein G affinity chromatography
UniProt	P05089
Localization	Cytoplasmic
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 2-4ug/ml for 30 min at RT
Limitations	This Arginase 1 antibody is available for research use only.



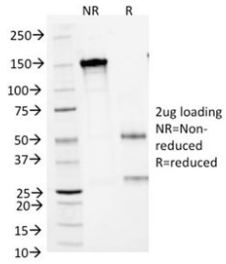
Western blot analysis of A) partial recombinant ARG1 protein and B) human liver lysate using Arginase 1 antibody (ARG1/1125). Predicted molecular weight ~35 kDa.



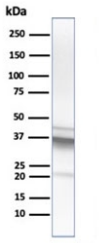
IHC: Formalin-fixed, paraffin-embedded human hepatocellular carcinoma stained with Arginase 1 antibody (ARG1/1125). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT prior to testing.



Arginase 1 Antibody Protein Microarray Validated clone ARG1/1125 specificity analysis using HuProt(TM) human protein microarray. Protein microarray screening containing more than 19,000 full-length human proteins demonstrates strong selective binding of the ARG1/1125 mouse monoclonal antibody to Arginase-1 (ARG1), which ranks as the top target with the highest Z-score signal on the array. This result indicates high target specificity for ARG1 compared with other proteins present on the microarray.
The Z-score represents the strength of the fluorescent signal generated when the antibody binds to a specific protein on the HuProt(TM) array and is expressed in standard deviations above the mean signal intensity of all proteins on the array. Targets ranked by descending Z-score identify the strongest antibody interactions. The S-score represents the difference between successive Z-scores and therefore reflects the relative specificity of the antibody for its intended target compared with other detected proteins.



SDS-PAGE analysis of purified, BSA-free Arginase 1 antibody (clone ARG1/1125) as confirmation of integrity and purity.



Western blot analysis of human liver lysate using Arginase 1 antibody (ARG1/1125). Predicted molecular weight ~35 kDa.

Description

Arginase-1 (ARG1), also referred to as arginase I or liver arginase, is a cytosolic enzyme encoded by the ARG1 gene that catalyzes the final step of the urea cycle, converting L-arginine into urea and ornithine. This metabolic reaction plays a central role in detoxification of ammonia and nitrogen metabolism in mammalian tissues. Arginase-1 is most abundantly expressed in hepatocytes of the liver, where the urea cycle functions to remove excess nitrogen generated during amino acid metabolism. Arginase 1 Antibody Protein Microarray Validated clone ARG1/1125 recognizes the ARG1 protein and supports research focused on arginine metabolism and liver-specific enzymatic pathways.

Arginase-1 belongs to the arginase enzyme family and functions as a manganese-dependent hydrolase localized primarily in the cytoplasm. The enzyme catalyzes hydrolysis of L-arginine to produce urea and L-ornithine, which subsequently contributes to polyamine and proline biosynthesis pathways. Because of this metabolic role, arginase-1 activity is tightly linked to hepatic nitrogen disposal and the maintenance of metabolic homeostasis.

ARG1 protein expression is strongly enriched in hepatocytes within normal liver tissue. The high level of hepatic expression makes arginase-1 a widely studied marker of hepatocellular differentiation in both normal liver biology and cancer research. Detection of arginase-1 protein is frequently used to investigate hepatocyte identity, liver metabolic function, and hepatocyte-derived tumor cells in experimental models.

Arginase-1 expression has also been investigated in the context of hepatocellular carcinoma and other liver-associated malignancies. Many hepatocyte-derived tumor cells retain ARG1 expression, making arginase-1 a useful biomarker when studying hepatocellular lineage and tumor cell differentiation. Detection of ARG1 protein allows researchers to examine metabolic enzyme expression in both normal and malignant liver cells while maintaining cellular context within tissue samples.

Clone ARG1/1125 has been validated using protein microarray analysis, a high-throughput approach used to evaluate antibody specificity across large panels of recombinant proteins. Protein microarray validation helps confirm that the antibody recognizes the intended ARG1 target with minimal cross-reactivity to unrelated proteins, supporting its use in research applications investigating arginase-1 expression.

Arginase 1 Antibody Protein Microarray Validated clone ARG1/1125 is a mouse monoclonal antibody designed to detect ARG1 protein in research applications. By enabling reliable detection of arginase-1, this antibody supports studies focused on hepatic metabolism, urea cycle biology, and cellular pathways involving arginine catabolism.

Application Notes

Optimal dilution of the Arginase 1 Antibody Protein Microarray Validated should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A recombinant fragment from amino acids 1-150 of human ARG1 was used as the immunogen for the Arginase 1 antibody.

Storage

Store the Arginase 1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Arginase-1 antibody, ARG1 antibody, Liver arginase antibody, Arginine ureahydrolase antibody