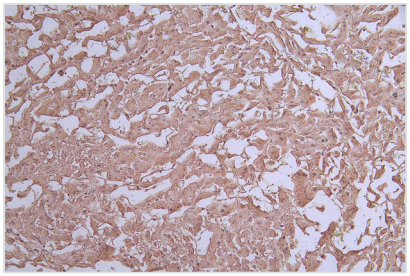
ARG1 Recombinant Monoclonal Antibody

Product Code	CSB-RA042122A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P05089
Immunogen	A synthesized peptide derived from Human ARG1
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Metabolism;Signal transduction
Gene Names	ARG1
Clone No.	31D12

Image



IHC image of CSB-RA042122A0HU diluted at 1:50 and staining in paraffin-embedded human liver cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.71% DAB.

Description

To generate a recombinant monoclonal antibody specific to ARG1, the initial step involved immunizing a rabbit with a synthesized peptide derived from human ARG1 protein. B cells were subsequently isolated from the immunized rabbit, and RNA was extracted from these cells. The extracted RNA was reverse-transcribed into cDNA, which was utilized as a template to extend ARG1 antibody genes using degenerate primers. These engineered ARG1 antibody genes were incorporated into a plasmid vector and transfected into host cells for expression. The resulting ARG1 recombinant monoclonal antibody

was isolated from the cell culture supernatant through affinity chromatography and evaluated for its utility in ELISA and IHC applications. It is only reactive with human ARG1 protein.

The main function of the ARG1 protein is to catalyze the conversion of arginine, an amino acid, into ornithine and urea in the urea cycle. This enzymatic reaction takes place in the liver and is a critical step in the process of removing toxic ammonia from the body. Mutations or deficiencies in the ARG1 gene can lead to a rare genetic disorder known as arginase deficiency or argininemia.