

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide**Mouse Monoclonal Antibody [Clone SPM615]****Catalog # AH11120****Specification**

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide - Product Information

Application	IHC, IF
Primary Accession	P31327
Other Accession	1373 , 149252
Reactivity	Human, Dog
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1
Calculated MW	~165kDa KDa

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide - Additional Information**Gene ID** 1373**Other Names**

Carbamoyl-phosphate synthase [ammonia], mitochondrial, 6.3.4.16, Carbamoyl-phosphate synthetase I, CPSase I, CPS1

Application Note

IHC~~1:100~500<br \>IF~~1:50~200

Storage

Store at 2 to 8°C. Antibody is stable for 24 months.

Precautions

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide - Protein Information**Name** CPS1**Function**

Involved in the urea cycle of ureotelic animals where the enzyme plays an important role in removing excess ammonia from the cell.

Cellular Location

Mitochondrion. Nucleus, nucleolus. Cell membrane {ECO:0000250|UniProtKB:Q8C196}; Peripheral

membrane protein; Extracellular side {ECO:0000250|UniProtKB:Q8C196} Note=Localizes to the cell surface of hepatocytes {ECO:0000250|UniProtKB:Q8C196}

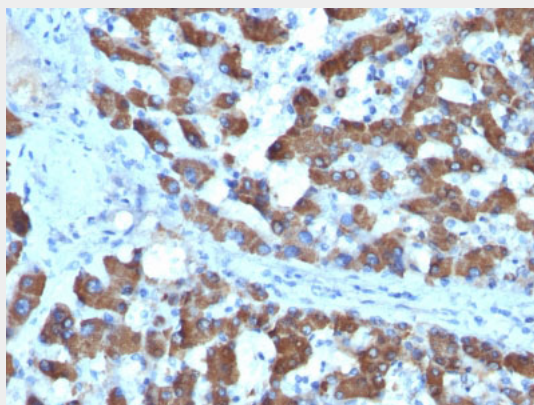
Tissue Location

Primarily in the liver and small intestine.

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide - 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](#)

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide - Images

Formalin-fixed, paraffin-embedded human Hepatocellular Carcinoma stained with CPS1 Monoclonal Antibody (SPM615).

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide - Background

This MAb recognizes a protein of 165kDa, identified as carbamoyl phosphate synthetase 1 (CPS1). This mitochondrial enzyme catalyzes synthesis of carbamoyl phosphate from ammonia and bicarbonate. This reaction is the first committed step of the urea cycle, which is important in the removal of excess urea from cells. A deficiency of CPS1 is an autosomal recessive disorder that causes hyperammonemia. CPS1 is a hepatocyte specific protein that localizes to the mitochondria of hepatocytes. It is a sensitive marker for distinguishing hepatocellular carcinomas (HCC) from other metastatic carcinomas as well as cholangio-carcinomas. HCCs occur primarily in the stomach, but they are also found in many other organs. CPS1 may also be a useful marker for intestinal metaplasia. Reportedly, strong expression of CPS1 correlates with smaller tumor size and longer patient survival. Occasionally, CPS1 is also found in gastric carcinomas as well as in a few other non-hepatic tumors.

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker) Antibody - With BSA and Azide - References

Haraguchi, Y., et al. 1991. Cloning and sequence of a cDNA encoding human carbamyl phosphate synthetase I: molecular analysis of hyperammonemia. *Gene* 107: 335-340. | Ramos-Vara, J.A., et al. *Histochem* 2002; J. 34: 397-401. | Fan, Z., et al. *Mod. Pathol* 2003; 16: 137-144, 2003. |