P.O. Box 3286 - Logan, Utah 84323, U.S.A. - Tel. (800) 729-8350 – Tel. (435) 755-9848 - Fax (435) 755-0015 - www.scytek.com

CPS1 / Carbamoyl-Phosphate Synthetase (Hepatocellular Marker); Clone SPM615 (Concentrate)

Availability/Contents:

Item #	Volume
RA0535-C.1	0.1 ml
RA0535-C.5	0.5 ml
RA0535-C1	1 ml

Description:

Species:	Mouse.
Immunogen:	Recombinant human CPS1 protein.
Clone:	SPM615
Isotype:	IgG1
Entrez Gene ID:	1373
Hu Chromosome Loc.:	2q35
Synonyms:	Carbamoyl-phosphate synthetase 1 (CPS1); Carbamoylphosphate synthetase 1; CPSase 1; CPSASE1.
Mol. Weight of Antigen:	~165kDa.
Format:	200ug/ml of antibody purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Specificity:	This monoclonal antibody recognizes a protein of 165kDa, identified as carbamoyl phosphate synthetase 1 (CPS1).
Background:	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. Ā 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. HCC s 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.
Species Reactivity:	Reacts with human and dog. Others not known.
Positive Control:	HeLa cells, liver, or hepatocellular carcinoma (HCC).
Cellular Localization:	Finely granular cytoplasmic.
Titer/ Working Dilution:	Immunohistochemistry (Frozen and Formalin-fixed): 0.25-0.5 µg/ml Immunofluorescence: 0.5-1 µg/ml
Microbiological State:	This product is not sterile.

Storage: 2° C 8° C

ScyTek Laboratories, Inc.
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CE

EC REP

Emergo Europe
Prinsessegracht 20
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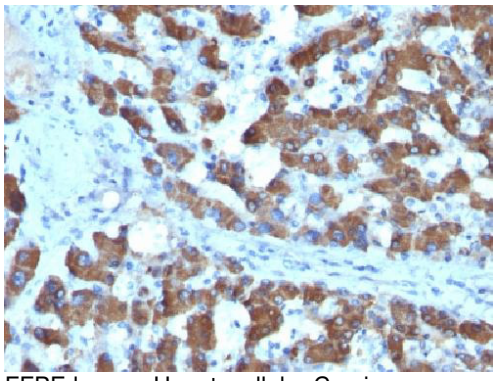
Uses/Limitations:

Not to be taken internally.
For Research Use Only.
This product is intended for qualitative immunohistochemistry with normal and neoplastic formalin-fixed, paraffin-embedded tissue sections, to be viewed by light microscopy.
Do not use if reagent becomes cloudy.
Do not use past expiration date.
Non-Sterile.



FFPE human Hepatocellular Carcinoma stained with CPS1; Clone SPM615.

Ordering Information and Current Pricing at www.scytek.com

Procedure:

Tissue Section Pretreatment (Required): Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with EDTA - Saline Buffer (10X Concentrate); pH 8.0 (ScyTek catalog# ETA500) for 20-45 minutes at >95°C followed by cooling to room temperature for 20 minutes.

2. **Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.

3. **Visualization:** For maximum staining intensity we recommend the "CRF Anti-Polyvalent HRP Polymer (DAB) Lab Pack" (ScyTek catalog# CPP125, see IFU for instructions), combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

Precautions:

Contains Sodium Azide as a preservative (0.09% w/v).
Do not pipette by mouth.
Avoid contact of reagents and specimens with skin and mucous membranes.
Avoid microbial contamination of reagents or increased nonspecific staining may occur.
This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.

References:

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

Warranty:

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products. Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used.

Storage: 2° C – 8° C

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