

## Arginase-1 (SP156)

The liver is one of the most common sites of cancer involvement. Cancer may often metastasize to the liver from other organs, such as the pancreas or colon, or cancer may arise in the liver itself. When liver cells (hepatocytes) become malignant, it is known as hepatocellular carcinoma. Worldwide, this is the third most common carcinoma, especially prevalent in Southeast Asia. Because carcinomas will metastasize to the liver and from the liver, immunohistochemical markers that will distinguish hepatocellular origin from non-liver origins are extremely valuable for differential diagnosis panels.

Recent publications indicate that arginase-1 is a valuable marker for diagnosing liver tumors. Compared to hepatocyte specific antigen (hep-par1), arginase-1 has a higher sensitivity for hepatocellular carcinomas, 96% compared with 84.1%. The sensitivities of arginase-1 in well, moderately, and poorly differentiated HCCs are 100%, 96.2%, and 85.7% respectively, whereas hepatocyte specific antigen demonstrated sensitivities of 100%, 83.0%, and 46.4%.<sup>1</sup> Another article suggests that arginase-1 is the most specific marker for HCC vs. non-HCC.<sup>2</sup>

### Benefits of Arginase-1:

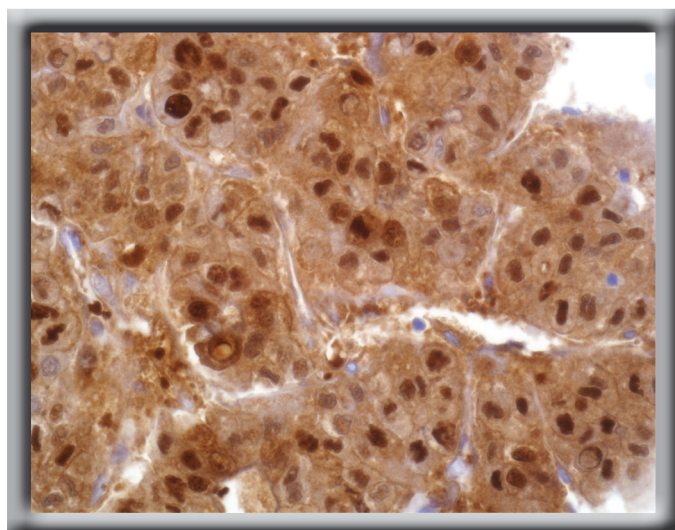
- Designated for *in vitro* diagnostic use.
- Enhances liver panel containing hep-par1 and glypican-3.
- Published higher sensitivity for HCC than hep-par1.<sup>1</sup>
- Published higher specificity for HCC than hep-par1 and glypican-3.<sup>2</sup>
- Useful in identifying poorly differentiated hepatocellular carcinoma.

1. Am J Surg Pathol. 2010 Aug;34(8):1147-54

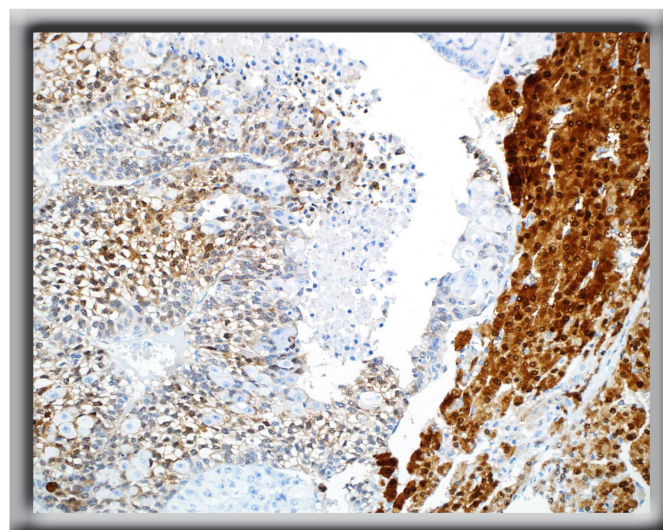
2. Am J Clin Pathol. 2012 Aug;138(2):203-10

### Ordering Information

|                                 |         |
|---------------------------------|---------|
| 0.1 ml concentrate .....        | 380R-14 |
| 0.5 ml concentrate .....        | 380R-15 |
| 1 ml concentrate .....          | 380R-16 |
| 1 ml predilute .....            | 380R-17 |
| 7 ml predilute .....            | 380R-18 |
| 5 positive control slides ..... | 380S    |



Anti-arginase-1 immunoreacts with hepatocellular carcinoma and stains the nuclei and cytoplasm of the malignant hepatocytes.



Anti-arginase-1 stains benign liver strongly whereas there is weak-to-moderate labeling of poorly differentiated hepatocellular carcinoma (clear cell variant) by anti-arginase-1 (left side of photo).