



## CYTOCHROME P450 (HEPATOCTE)

### ANTIGEN FOUND IN:

The cytochrome P450 (CYP) superfamily is a large and diverse group of enzymes, most of which catalyze the oxidation of organic substances. A hepatocyte is a cell of the main tissue of the liver. Hepatocytes make up 70-80% of the liver's cytoplasmic mass. These cells play a role in: protein synthesis; protein storage; transformation of carbohydrates; synthesis of cholesterol, bile salts and phospholipids; detoxification; modification, and excretion of exogenous and endogenous substances; and initiates formation and secretion of bile.

### ASSOCIATED WITH:

Autoimmune Hepatitis Type 2<sup>4</sup>  
 Chronic Hepatitis C<sup>4</sup>  
 Hepatocellular Carcinoma<sup>3</sup>  
 Liver/Mycrosomal Autoimmunities<sup>1 2</sup>

### KNOWN CROSS-REACTIONS:

asialoglycoprotein receptor<sup>2</sup>

### CLINICAL SIGNIFICANCE:

Because anti-hepatocyte antibodies have high specificity for autoimmune hepatitis and are directed against a single antigen, increased antibody levels may indicate a pertinent pathogenic process. Antibodies to hepatocytes may be potential markers of a genetic propensity for recrudescence disease, the target auto-antigen, and nonspecific autoimmune exacerbators. Hepatocyte antibodies can be used as complementary to conventional markers, such as anti-nuclear antibodies and actin antibodies, in the clinical assessment of patients with type 1 autoimmune hepatitis.<sup>2</sup> Alopecia has been recognized as an extrahepatic manifestation of type 2 autoimmune hepatitis and thus its appearance could alert the practitioner to an increased risk of autoimmune hepatitis in the pediatric population.<sup>1</sup>

### References:

1. Chaves V, et al. Anti-liver-kidney microsome antibody-positive autoimmune hepatitis associated with alopecia. *J Pediatr Gastroenterol Nutr*, 1991; 12:288-290.
2. Czaja AJ, et al. Antibodies to soluble liver antigen/liver pancreas and HLA risk factors for type 1 autoimmune hepatitis. *Am Coll Gastroenterol*, 2002; 97(2):413-419.
3. Wood AJ, et al. Hepatocellular carcinoma metastatic to skin: diagnostic utility of antihuman hepatocyte antibody in combination with albumin in situ hybridization. *J Cutan Pathol*, 2009; 36:262-266.
4. Zachou K, et al. Autoantibodies and autoantigens in autoimmune hepatitis: important tools in clinical practice and to study pathogenesis of the disease. *J Autoimmune Dis*, 2004; 1:2 doi:10.1186/1740-2557-1-2