CYREX® Laboratories

CLINICAL SPECIFICATIONS

PARIETAL CELL + ATPASE

Function:

Parietal cells, also known as, Oxyntic Cells, are stomach epithelium cells, which secrete gastric acid and intrinsic factor. ATPases are a class of enzymes that increase the rate of the decomposition of adenosine triphosphate (ATP) into adenosine diphosphate (ADP) and a free phosphate ion. This dephosphorylation reaction releases energy. ATPase harnesses this energy to drive other chemical reactions.

Antibodies Appear:

Gastric Autoimmunity[1, 2, 3, 4]
Chronic Atrophic Gastritis[4]
Pernicious Anemia[6]

Known Cross-Reactions: Kidney brush border,[5] *Helicobactor pylori* lipopolysaccharide,[7] *Helicobactor pylori*[8]

Clinical Significance:

Antibodies against Parietal Cell have been shown in autoimmune gastric disorders.[2, 3, 4] Due to the role Parietal Cells play in the absorption of Vitamin B12, patients with Parietal Cell antibodies exhibit Vitamin B12 deficiency.[5] A high prevalence of Parietal Cell antibodies and associated autoimmune gastric disease is present in Parietal Cell antibody-positive-type 1 diabetic patients.[2, 3] Thus, type 1 diabetic patients should be screened for antibodies to Parietal Cells. Early detection of these antibodies and the subsequent iron deficiency anemia, pernicious anemia and/or atrophic gastritis, could reduce the morbidity in the type 1 diabetic population.[3] In the majority of adult patients with autoimmune gastritis, parietal cells are the target of the autoimmune destruction, the pathogenesis of which utilizes ATPases.[4]

References:

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