

## Anti-GPC

ELISA for the quantitative determination of  
IgG antibodies against gastric parietal cells



### Product Highlights

- Serological marker for type A gastritis and pernicious anemia
- Excellent diagnostic efficiency with high sensitivity and specificity
- Automatable

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## Antibodies against Gastric Parietal Cells

### Importance in the Diagnosis of Pernicious Anemia

#### Pernicious Anemia

Pernicious anemia (Biermer's disease) is based on an undersupply of vitamin B12, which in turn can be due to a lack of intrinsic factor.

#### Vitamin B12 and the Intrinsic Factor

Vitamin B12 is essential for the formation of blood cells. It is formed by microorganisms, ingested with food, released in the stomach by proteolytic processes and bound to intrinsic factor (IF). The intrinsic factor is a glycoprotein produced in the parietal cells of the gastric mucosa. It protects the vitamin from decomposition and is used for its absorption in the small intestine. A lack of intrinsic factor can lead to an undersupply of vitamin B12 and thus to pernicious anemia.

#### Pathogenesis

Type A gastritis is a chronic autoimmune disease in which antibodies against parietal cells and intrinsic factor attack the gastric mucosa. The destruction of the parietal cells leads to a reduced absorption of vitamin B12 and thus to its undersupply due to a lack of intrinsic factor. Genetic causes, the surgical removal of a section of the stomach and chronic inflam-

mation of the gastric mucosa can also result in a lack of intrinsic factor. A lack of vitamin B12 can also be triggered by medication or a diet that is too one-sided and therefore unbalanced.

#### Clinical Symptoms

Typical symptoms of pernicious anemia are fatigue, increased heart rate and paleness as a result of the anemia. Indigestion and abdominal pain also occur. Neurological symptoms such as numbness in the hands and feet, unsteady gait, coordination disorders or paralysis often occur without signs of anemia. Visual disturbances or the picture of a polyneuropathy are also possible. Poor concentration, depression and psychoses, schizophrenia and dementia have also been described. Pernicious anemia can progress to funicular myelosis.

#### Diagnosis

The diagnosis of pernicious anemia is based on the clinical symptoms and a large number of laboratory diagnostic tests. To detect an autoimmune disease, antibodies against parietal cells, against the H<sup>+</sup>/K<sup>+</sup> ATPase of the stomach and against the intrinsic factor are determined.





# Anti-GPC – Enzyme Immunoassay for the quantitative Determination of IgG Antibodies against Gastric Parietal Cells

## Antigen

The Anti-GPC ELISA immunoassay is based on the use of porcine H+/K+ ATPase.

## Calibration

The Anti-GPC ELISA immunoassay is calibrated using an internal reference sample. Quantitative results are expressed in U/mL.

## Precision

The precision of the immunoassay was assessed by the determination of the intra- and interassay variation with multiple samples of different antibody activities.

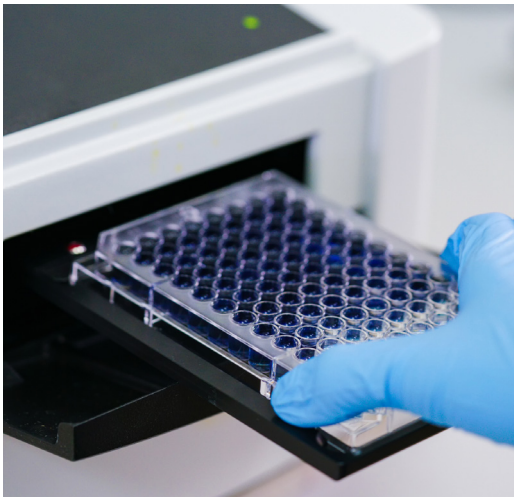
	INTRAASSAY PRECISION		INTERASSAY PRECISION	
	U/mL	CV (%)	U/mL	CV (%)
Sample 1	18.8	3.4	18.9	4.8
Sample 2	59.9	4.1	61.5	3.1
Sample 3	180.2	3.1	180.4	4.1

## Diagnostic Sensitivity and Specificity

Sensitivity and specificity were assessed by the analysis of 115 samples from patients with pernicious anemia and unselected blood donors.

	DIAGNOSTIC PERFORMANCE
Sensitivity	99 %
Specificity	> 74 %





## Anti-GPC

Enzyme immunoassay for the quantitative determination of IgG antibodies against gastric parietal cells in human serum

### HIGH QUALITY – MADE IN GERMANY

- Use of porcine H<sup>+</sup>/K<sup>+</sup> ATPase
- Ready-to-use (exception: wash buffer) and barcoded reagents
- Quality assured handling in routine laboratories
- Short incubation times (60 min / 30 min / 15 min) at room temperature
- Quantitative determination of IgG antibodies
- Calibrated by use of an internal reference sample
- Results expressed in U/mL
- Excellent diagnostic sensitivity and specificity
- High precision within the measurement range
- CE marked
- Automatable

### Product Information

#### Anti-GPC



### Contact

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### Order Information

**Anti-GPC**  
(96 Determinations)

**REF 3610**