Immunofluorescent kit for determination of IgG antibodies to mitochondria (AMA), smooth muscle (ASMA), liver and kidney microsomes (LKM) and parietal cells (GPC) on a section of rat liver, kidney and stomach in human serum or plasma
Primary biliary cirrhosis is a chronic liver disease, characterised by damage to interlobular and intrahepatic bile ducts. The destruction of the bile ducts leads to cholestasis and jaundice. Untreated disease can result in cirrhosis of the liver.

Diagnosis of primary biliary cirrhosis is based on the evaluation of clinical and laboratory tests. Detection of highly specific IgG antibodies to mitochondria is an important examination leading to a correct diagnosis of the disease.

Detection of anti-mitochondrial antibodies is carried out primarily on rat kidney sections. In positive reactions, the autoantibodies react with mitochondria in the cytoplasm of cells of distal and proximal tubules and there is yellow-green granular fluorescence in the tubules. On the rat liver section, there is granular fluorescence in the hepatocytes. On the rat stomach section, there is granular fluorescence in the parietal and chief cells.

Autoimmune hepatitis is an acute or chronic inflammation of the liver. Acute hepatitis has symptoms of jaundice and can lead to sudden liver failure or passes into chronic active hepatitis. Chronic hepatitis is asymptomatic and gradually leads to cirrhosis of the liver.

The following are important for the diagnosis of autoimmune hepatitis: clinical picture of the disease, liver biopsy and laboratory test results. Determination of IgG antibodies to smooth muscle, and liver and kidney microsomes helps determine the correct diagnosis.

Detection of antibodies to smooth muscle is done primarily on rat stomach sections. In positive reactions, the autoantibodies react with the muscle cells in the mucosal fibrous layer, with muscle layer of mucosa and with muscle fibres in the walls of blood vessels, creating a homogeneous yellow-green fluorescence of muscle fibres. The rat liver sections show homogeneous fluorescence of muscle fibres in the walls of blood vessels. The rat kidney sections show glomerular mesangial cells fluorescence, fluorescence of muscle fibres in the walls of blood vessels and fluorescence of peritubular areas.

Detection of liver/kidney microsomal antibodies is performed primarily on rat kidney sections. In positive reactions, the autoantibodies react with proximal tubules and there is yellow-green granular fluorescence in tubules. Rat liver sections show homogeneous cytoplasmic fluorescence in hepatocytes and rat stomach sections provide no fluorescence.
Positive fluorescence pattern ASMA

Positive fluorescence pattern LKM1

Rat stomach section

Rat kidney section

Rat liver section

Rat kidney section

Rat liver section

Rat stomach section

**Test Principle**

IIF kits are based on the indirect immunofluorescence method.

**Summary Protocol**

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Test steps</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Dilute samples - screening serum/plasma 1:40 (10 μl + 390 μl)</td>
</tr>
<tr>
<td>2</td>
<td>Add Controls (1 drop) and diluted samples (35 μl)</td>
</tr>
<tr>
<td>3</td>
<td>Incubate at room temperature for 30 min</td>
</tr>
<tr>
<td>4</td>
<td>Rinse and wash the slide 2 × 5 min Shaker</td>
</tr>
<tr>
<td>5</td>
<td>Pipette Conjugate (1 drop)</td>
</tr>
<tr>
<td>6</td>
<td>Incubate at room temperature for 30 min</td>
</tr>
<tr>
<td>7</td>
<td>Rinse and wash of the slide 2 x 5 min Shaker</td>
</tr>
<tr>
<td>8</td>
<td>Dye of substrate in Evans blue 1 × 5 min Shaker</td>
</tr>
<tr>
<td>9</td>
<td>Add Mounting medium and cover with overslip</td>
</tr>
<tr>
<td>10</td>
<td>Evaluate using of fluorescence microscope</td>
</tr>
</tbody>
</table>
Autoimmune gastritis is a chronic inflammation of gastric mucosa. This disease is associated with damage to the parietal cells in the stomach which can lead to atrophy of the gastric mucosa. There is a loss of production of hydrochloric acid and intrinsic factor. Lack of intrinsic factor leads to pernicious anaemia.

The diagnosis of autoimmune gastritis and pernicious anaemia is based on the clinical picture, gastric biopsy and laboratory tests. The determination of highly specific IgG antibodies to the parietal cells provides correct diagnosis of the disease and distinguishes pernicious anaemia from other anaemia types.

The detection of antibodies to parietal cells is performed primarily on rat stomach sections. In positive reactions, the autoantibodies react with parietal and chief cells and cause yellow-green granular fluorescence in the cells of the stomach. Rat liver and kidney sections show no fluorescence.

**Positive fluorescence pattern GPC**

![Rat stomach section](image1)

![Rat liver section](image2)

![Rat kidney section](image3)

**Test Characteristics**

<table>
<thead>
<tr>
<th></th>
<th>Diagnostic Sensitivity</th>
<th>Diagnostic Specificity</th>
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<tbody>
<tr>
<td>IIF AMA, ASMA IgG</td>
<td>97.96%</td>
<td>99.00%</td>
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</tbody>
</table>

**User Comfort**

- Reagents in dropper bottles for comfort dispensing
- Blotting papers

**Advantages**

- High quality tissue sections
- Evans blue separately
- Components in sufficient volumes
Negative fluorescence patterns

*Rat kidney section*

*Rat liver section*

*Rat stomach section*
### Ordering information

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Product</th>
<th>No. of Tests</th>
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<tbody>
<tr>
<td>AMAF100</td>
<td>IIF AMA, ASMA IgG (Rat L/K/S)</td>
<td>100</td>
</tr>
</tbody>
</table>

**Contact**

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Company is certified to the quality management system standards ISO 9001 and ISO 13485 for in vitro diagnostics.