

# Lactoferrin

## General:

Lactoferrin (LF), also known as lactotransferrin, belongs to the transferrin family of proteins (transferrin, melanotransferrin, ovotransferin, etc.). Its molecular mass is 80 kDa and generally contains two bound Fe<sup>+2</sup> ions.

Lactoferrin antimicrobial activity is due partly to its high affinity for Fe<sup>3+</sup> (ferric state). LF proteolysis produces lactoferricin, kaliocin-1 small peptides with antimicrobial activity. The combination of iron and lactoferrin in mucosal secretions modulate the ability and aggregation of pathogenic bacteria, and inhibit both bacteria and viruses by binding to host cells/viral particles. This inhibits the ability of bacteria and viruses to attach to cell membranes, mainly at mucosae. Lactoferrin is found in milk and many mucosal secretions such as tears and saliva. Lactoferrin is also present in secondary granules of PMN and also is secreted by some acinar cells. Human colostrum has the highest concentration, followed by human milk, then cow milk.

The following tests are available:

- **Lactoferrin in stool**

Indication: chronic inflammatory (Morbus Crohn, Colitis ulcerosa) and noninflammatory bowel diseases (f.e. Colon irritabile), monitoring activity under steroidal therapy

Material: 5 g stool

TAT: 7-10 days\*

Method: EIA

Ref.- range: <7.2

Note: avoid taking non-steroidal anti-inflammatories (NSAIDS) for 2 days prior to taking the test (aspirin, ibuprofen, naproxen etc)

- **Lactoferrin antibodies in serum**

Indication: Determination of the antibody specificity with positive IFT-ANCA and negative PR3- or MPO-ANCA. The diagnostic relevance of these autoantibodies is not significant due to their low specificity.

Material: 1 ml serum

TAT: 7-10 days\*

Method: EIA

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit

<http://www.fml-dubai.com/parameter-listings/>