

## Anaplasma phagocytophilum

# Enzyme immunoassay for the diagnosis of anaplasmosis

**IMMUNOBLOT** kits are optimized and validated for detection of IgG and IgM antibodies in human serum and plasma

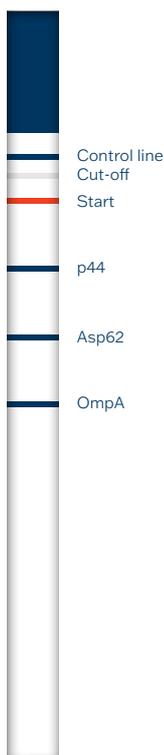
## Introduction

**Human granulocytic anaplasmosis (HGA)** is a disease caused by *Anaplasma phagocytophila* bacteria. Clinically, the disease can manifest itself in various ways – from entirely asymptomatic to rather serious forms. Characteristic manifestations may include: fever, headache, muscle and joint aches, skin alterations (erythema migrans similar to Lyme borreliosis, mostly accompanied by maculopapular rash and hemorrhage), hepatosplenomegaly and lymphadenopathy. Antibodies

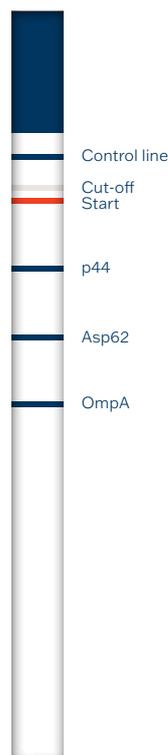
are detectable approximately two weeks after the outbreak of the infection, which is why acute infections (30-60% positivity) are not always diagnosed correctly. During the convalescence time we usually find positivity in 70-90% of samples.

## Antigens

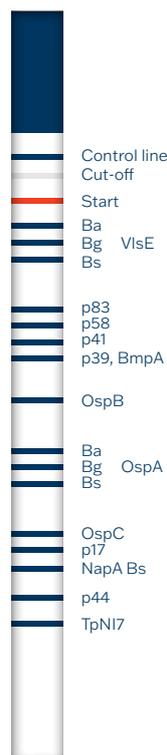
**BLOT-LINE  
Anaplasma IgG**



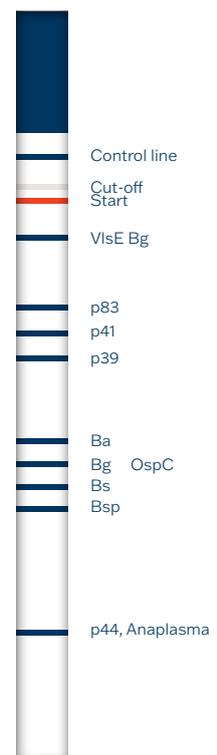
**BLOT-LINE  
Anaplasma IgM**



**BLOT-LINE  
Borrelia/HGA IgG**



**BLOT-LINE  
Borrelia/HGA IgM**



**p44** – main antigen of antibody response to HGA

**Asp62** – surface protein; works as a membrane transporter

**OmpA** – surface protein of outer membrane; lipoprotein associated with peptidoglycans; significant marker of virulence

\* In case of positive results within the *Anaplasma* screening it is recommended to perform further examination to confirm the HGA

## Summary protocol

Step	Test steps
1.	Pipette Universal solution 2.5 ml
2.	Strips soaking 10 min. at room temperature – Shaker
3.	Aspirate
4.	Dilute samples – serum/plasma 1:51 (30 µl + 1,5 ml)
5.	Pipette Controls and diluted samples 1.5 ml
6.	Incubate 30 min. at room temperature – Shaker
7.	Aspirate samples and wash strips with 1.5 ml of Universal solution 3-times for 5 min. – Shaker
8.	Pipette Conjugate 1.5 ml
9.	Incubate 30 min. at room temperature – Shaker
10.	Aspirate Conjugate and wash strips with 1.5 ml of Universal solution 3-times for 5 min. – Shaker
11.	Pipette Substrate solution (BCIP/NBT) 1.5 ml
12.	Incubate 15 min. at room temperature – Shaker
13.	Aspirate Substrate solution and wash strips with 2 ml of distilled water 2-times for 5 min. – Shaker
14.	Read colour intensity at 450 nm

## Clinical Application

- Confirmatory method to the screening test
- Method for proof of acute infection
- Method for detailed determination of the presence of anti-Anaplasma specific antibodies

## Advantages

- Easy interpretation and reproducibility of results
- High sensitivity and specificity
- Compatibility with all commercial immunoblot processing Systems
- Customer support

## Test characteristics

ELISA	Diagnostic Sensitivity	Diagnostic Specificity
BLOT-LINE Anaplasma IgG	92.0%	94.0%
BLOT-LINE Anaplasma IgM	91.4%	99.0%
BLOT-LINE Borrelia/HGA IgG	92.9%	91.7%
BLOT-LINE Borrelia/HGA IgM	93.3%	93.9%

## BLOT-LINE kit





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## Ordering Information

IMMUNOBLOT

<u>Cat. No.</u>	<u>Product</u>	<u>No. of Tests</u>
ApGL10	BLOT-LINE Anaplasma IgG	10
ApML10	BLOT-LINE Anaplasma IgM	10
BGL020	BLOT-LINE Borrelia/HGA IgG	20
BML020	BLOT-LINE Borrelia/HGA IgM	20
SwIm03	Immunoblot Software	1 pc



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