

recomLine Bunyavirus IgG/IgM

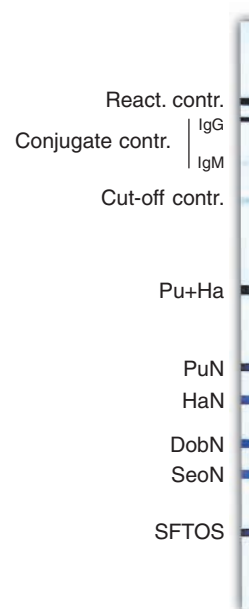
Strip-Immunoassay with antigens produced by recombinant techniques for the detection of IgG and IgM antibodies against Hantavirus (serotypes Puumala, Hantaan, Dobrava and Seoul) as well as Sandfly Fever Virus (serotype Toscana, TOSV).

Most of the Bunyaviruses can be found in the tropics and subtropics with an exception of the genera Hantavirus und Phlebovirus which are also represented in Europe. Puumalavirus, which belongs to the Hantavirus genus is found in Scandinavia, Europe and Eastern Europe countries. The Sandfly Fever Virus, belonging to the Phlebovirus genus, spreads out in the mediterranean countries.

Sandfly Fever Virus: A few Bunyaviruses in Europe are transmitted by insects (Sandfly, Phlebotomus). The Sandfly Fever (syn. pappataci fever), caused by the SF-Virus, is normally characterised by a feverish disease associated with a mild headache. Only the infection with the serotype Toscana (TOSV) can cause fever, strong, frontal headache and an aseptic meningitis with strong neurological symptoms. The prevalence of anti-TOSV IgG is about 2 %.

Hantavirus: Hantaviruses are transmitted to humans in aerosols of rodent secretions. They cause haemorrhagic fever with renal syndrome (HFRS) and hantavirus pulmonary syndrome (HPS). The Puumalavirus causes a HFRS similar disease with a mild course (Nephropathia epidemica). The infection often proceeds asymptomatic. In Germany about 1,7 % of the population display antibodies against Puumalavirus.

The *recomLine* Bunyavirus allows the detection of IgG and IgM antibodies against genetically engineered Hantavirus N-antigens (serotype Puumala, Hantaan, Dobrava and Seoul). Two serotype clusters have to be discriminated here: a) Puumala/Sin Nombre and b) Hantaan/Dobrava/Seoul, which can result, according to the respective infection, in a typical band pattern on the *recomLine* Bunyavirus (see evaluation). Besides the Hantavirus infections, Sandfly Fever Virus infections (serotype TOSV) can be detected with the *recomLine* Bunyavirus too.



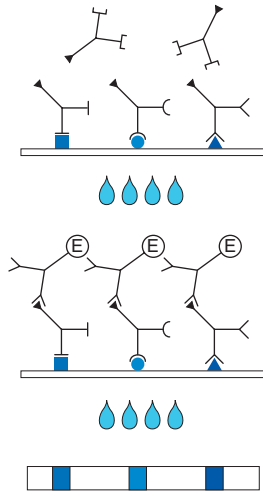
Product Advantages

- **Recombinant antigens**, therefore:
 - High sensitivity and specificity
 - Easy and clear interpretation due to easy to read bands
- Easy test procedure; automation possible
- Safe evaluation due to strip specific controls (cut-off and conjugate control)
- Separate detection of IgG and IgM antibodies possible
- Detection of Hantavirus and Sandfly Fever Virus infections
- **Discrimination of Hantavirus serotype clusters is possible mostly**
- CE label: The *recomLine* Bunyavirus IgG/IgM meets the high standard of the EC directive 98/79/EC on in vitro diagnostic medical devices

Recombinant Bunyavirus Antigens

Band	Description	Size of rec. antigen
Pu+Ha	Complete nucleocapsid antigen from Puumala and Hantaan virus	~ 50 kDal
PuN	Serotype specific N-terminal part of the Puumala virus nucleocapsid antigen	~ 13 kDal
HaN	Serotype specific N-terminal part of the Hantaan virus nucleocapsid antigen	~ 13 kDal
DobN	Serotype specific N-terminal part of the Dobrava virus nucleocapsid antigen	~ 13 kDal
SeoN	Serotype specific N-terminal part of the Seoul virus nucleocapsid antigen	~ 13 kDal
SFTOS	Complete Sandfly Fever Virus nucleocapsid antigen (serotype TOSV)	~ 29 kDal

Testprinciple and Procedure



1st Incubation: A test strip loaded with Bunyavirus antigens is incubated with diluted serum or plasma in a dish for **60 min.**

wash 3 times

2nd Incubation: Peroxidase conjugated anti-human antibodies (IgG or IgM specific) are added. Incubate for **45 min.**

wash 3 times

3rd Incubation: **5 - 10 minutes** after addition of the coloring solution, insoluble colored bands develop at the sites on the test strips occupied by antibodies.

Evaluation

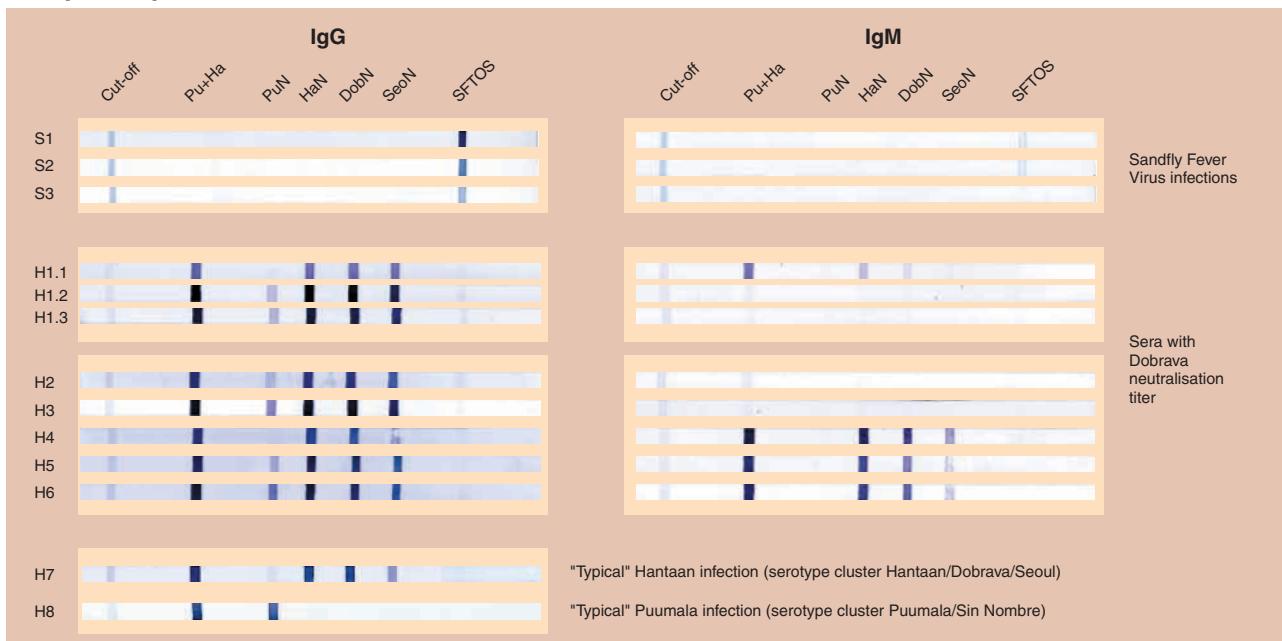
Blood donors

	Hantavirus		Sandfly Fever Virus	
	IgG	IgM	IgG	IgM
negative	85	86	85	85
equivocal	0	0	0	1
positive	1	0	1	0

Positive sera

	Hantavirus neutralisation titer	
	IgG (n = 25)	IgM (n = 12)
negative	0	5
equivocal	0	1
positive	25	6

Sample strips



Storage and Shelf Life

At 4 °C, 18 months from the time of production

Commercial Product

Article No. 4872 **recomLine Bunyavirus IgG/IgM**
Reagents for 25 determinations