

NEW SeroMP™ Recombinant ELISA kit for improved identification of pneumoniae infections

The SeroMP™ Recombinant kit is Savyon Diagnostics new assay for the semi-quantitative determination of antibodies to *M. pneumoniae* recombinant antigens in the IgG and IgA ELISA and a mixture of recombinant and native antigen in the IgM ELISA.

The kit is semi quantitative utilizing three ready to use calibrators.

Current Diagnosis

Mycoplasma pneumoniae culture is successful in as few as forty percent of cases, requires two to three weeks to grow and requires sampling of respiratory secretions. PCR does not distinguish carriers from acute infection, since the organism can be excreted from the respiratory tract for several weeks after the acute infection. Therefore, routine laboratory methods for diagnosis of *Mycoplasma pneumoniae* infection are based primarily on serology. Some ELISA tests offer high sensitivity but poor specificity due to high positives rate. Current identification of the pathogen enables physicians to choose the most effective course of treatment efficiently. In addition, excessive, unnecessary antibiotic treatment is expensive and contributes to the emergence of drug resistant bacteria. Therefore improved discrimination between positive and negative results in both sick and healthy populations is vital.

Why a recombinant ELISA?

The SeroMP™ Recombinant presents improved performance parameters in different aspects, which bring to a net result of increasing the difference between sick and healthy populations and between positive and negative results. The assay has reduced dependence upon growing bacteria, therefore reducing variation between batches of ELISA that may derive from this reason. The kit enables a differential determination of specific IgG, IgA and IgM antibodies, as well as the possibility to adapt the assay for automation.

The added value of using recombinant antigen:

- Specificity increased due to substantial reduction of prevalence in healthy population
- Borderline results are clarified to either positive or negative values
- Sensitivity is maintained or increased in parallel with increasing specificity



Ordering information

| Kit name | No. Tests/Kit | Catalog No. |
|-------------------------|---------------|-------------|
| SeroMP™ Recombinant IgG | 96 Tests | A1261-01M |
| SeroMP™ Recombinant IgG | 192 Tests | B1261-01M |
| SeroMP™ Recombinant IgM | 96 Tests | A1262-01M |
| SeroMP™ Recombinant IgM | 192 Tests | B1262-01M |
| SeroMP™ Recombinant IgA | 96 Tests | A1263-01M |
| SeroMP™ Recombinant IgA | 192 Tests | B1263-01M |

Savyon's SeroMP™ Recombinant represents a new generation of tests

The effect of recombinant based - compared to native based- antigen in IgG, IgA and IgM in pneumonia patients *

| | Group | Native Antigen % | Recombinant Antigen % |
|-------------|-------------|------------------|-----------------------|
| IgG N=91 | Positive | 35 | 45 |
| | Border line | 12 | 0 |
| | Negative | 53 | 55 |
| IgA N=91 | Positive | 44 | 58 |
| | Border line | 16 | 0 |
| | Negative | 40 | 42 |
| IgM N=91 | Positive | 63 | 65 |
| | Border line | 2 | 2 |
| | Negative | 35 | 33 |

The effect of recombinant based- compared to native based- antigen in IgG, IgA and IgM in a healthy population *

| | Group | Native Antigen % | Recombinant Antigen % |
|-------------|-------------|------------------|-----------------------|
| IgG N=91 | Positive | 27 | 10 |
| | Border line | 30 | 0 |
| | Negative | 43 | 90 |
| IgA N=91 | Positive | 7 | 4 |
| | Border line | 13 | 0 |
| | Negative | 80 | 96 |
| IgM N=91 | Positive | 3 | 1 |
| | Border line | 0 | 0 |
| | Negative | 97 | 99 |

- In the pneumonia patients - rate of positive is higher and border line samples are eliminated in the recombinant test (in IgM border line is not significant)
- In the healthy population – rate of positive is lower and border line samples are eliminated in the recombinant test

Comparison between Savyon and competitor MP Recombinant kits *

| | Group (N) | SeroMP Recombinant % POS. | Commercial MP % POS. |
|-----|-------------------------|---------------------------|----------------------|
| IgG | Healthy Population (30) | 20 | 40 |
| | Pneumonia Patients (61) | 32.8 | 36.1 |
| IgA | Healthy Population (30) | 6.6 | 3.3, 6.6 (BL) |
| | Pneumonia Patients (61) | 55.7 | 42.6 |
| IgM | Healthy Population (30) | 6.6 | 3.3 |
| | Pneumonia Patients (56) | 64.2 | 44.6, 18 (BL) |

- Higher sensitivity of the SeroMP recombinant in pneumonia patients experiencing acute or current infections, as represented by IgM and IgA results
- The prevalence within the healthy population is lower in Savyon SeroMP recombinant assay
- The discrimination between sick patients and healthy population in cases of acute and current infections will be greater in the SeroMP recombinant

* In house study

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