Respiratory Syncytial Virus (RSV) Antigens

ZIVA™ Acute Respiratory Viral Serology Array

For research use only. Not for use in diagnostic procedures

Description

RSV antigens

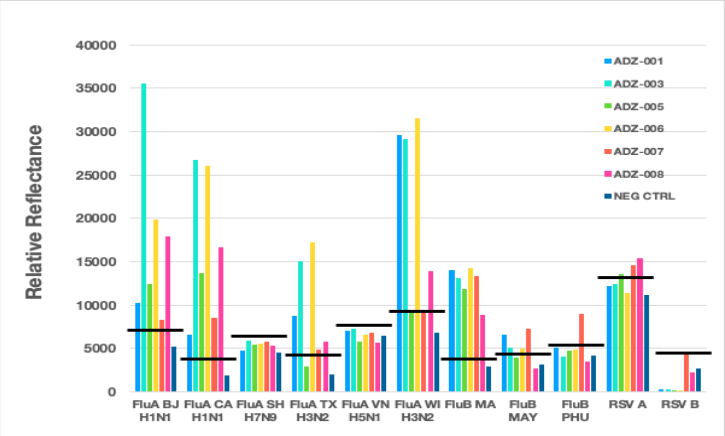
Strain	UniProt Accession Number
RSV (A, rsb1734) G Protein (His Tag)	P27022
RSV (B1) G Protein (His Tag)	O36633

Amongst infants, Human respiratory syncytial virus (HRSV) is the most common etiological agent of acute lower respiratory tract disease. HRSV consists of two major surface glycoproteins (G and F) that are important in the initial stages of infection. Attachment of the virus to the host cell membrane is through the G protein, while the fusion or F protein allows entry of the virus ribonucleoprotein into the cell cytoplasm by fusing the viral and cell membranes. G and F proteins together initiating infection.

Data Analysis

Upon completion of the run by ZIVA, the images for each array are automatically analyzed. This process involves assessing the intensity of each spot assigned to a target analyte (minimum of 3 spots per analyte), calculating the average intensity for each analyte, and normalizing the average intensity to an internal standard on each array to produce the reflective intensity unit (RIU) per analyte.

The negative controls are used to determine the threshold of significance for a positive result. The threshold is based on the 95% confidence interval using a minimum of n=3 negative control replicates and is applied universally to all targets. In addition, the user can use the tag feature in the software for additional controls (negative and/or positive) and export the normalized RIU for customer-specific analysis.



Performance Characteristics

Analytical Sensitivity

The following list of antigens will react with the positive control provided in the assay kit. Each antigen should result in a signal that is a minimum of + 2 SD above the negative control. The analytical sensitivity

*LOQ was determined by estimating the minimal amount of positive control that could be detected on a 95% confidence interval. The LOQ is an estimated range based off 3 independent assay runs.

Antigen	Type of positive control	Estimated LOQ (ng/ml)*
SARS-CoV-2 RBD	Rabbit Polyclonal	95-112
SARS-CoV-2 S1	Rabbit Polyclonal	98-108
SARS-CoV RBD	Rabbit Polyclonal	313-376
SARS-CoV-2 D614G	Rabbit Polyclonal	804-885
MERS-CoV RBD	Rabbit Polyclonal	6,820-8,203
Influenza B Malaysia	Rabbit Polyclonal	53-71
Influenza B Phuket	Rabbit Polyclonal	336-455
Influenza B Massachusetts	Rabbit Polyclonal	1,033-1,356

In addition, the following antigens have been tested with either a monoclonal or polyclonal antibody as part of the validation and quality control of the array but are not provided in the positive control of the assay kit:

Antigen	Quality control
Influenza A H3N2 (Wisconsin, Texas)	Rabbit Polyclonal
Influenza A H2N1	Rabbit Polyclonal
RSV A and B	Rabbit Polyclonal
Influenza A H5N1	Rabbit Polyclonal
Influenza A H7N9	Rabbit Polyclonal

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Stability

Upon receiving your kit, the box can be stored in 4°C until use. All components are guaranteed for a minimum of 3 months from date of purchase when stored as specified.

Sample Collection and Storage

Sample Preparation

The sample collection and storage conditions listed below are intended as general guidelines.

Serum: Use a serum separator tube (SST) and allow samples to clot for 30 minutes at room temperature before centrifugation for 15 minutes at 1000 x g. Remove serum and assay immediately or aliquot and store samples at ≤ -20° C. Avoid repeated freeze-thaw cycles.

Plasma: Collect plasma using heparin or EDTA as an anticoagulant. Centrifuge for 15 minutes at 1000 x g within 30 minutes of collection. Assay immediately or aliquot and store samples at ≤ -20° C. Avoid repeated freeze-thaw cycles.

Frozen samples (serum or plasma): When using frozen samples, it is recommended to thaw the samples completely, mix well by vortexing and centrifuge prior to use in the assay to remove particulates.

Ordering information

Item Number	Item Description
MSZ7-ARV-FP3000K	Acute respiratory viral serology array v1.0 27 plex

References

1.White JM, Hoffman LR, Arevalo JH, et al. (1997). "Attachment and entry of influenza virus into host cells. Pivotal roles of hemagglutinin". In Chiu W, Burnett RM, Garcea RL. Structural Biology of Viruses. 2.Suzuki Y (March 2005). "Sialobiology of influenza: molecular mechanism of host range variation of influenza viruses". Biol. Pharm. Bull. 28 (3): 399–408. 3.Senne DA, Panigrahy B, Kawaoka Y, et al. (1996). "Survey of the hemagglutinin (HA) cleavage site sequence of H5 and H7 avian influenza viruses: amino acid sequence at the HA cleavage site as a marker of pathogenicity potential". Avian Dis. 40 (2): 425–37

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