

RSV Nucleocapsid Antibodies: Validation and Performance

Antibodies Overview

Our specialized antibodies are meticulously designed to target the Nucleocapsid Protein of Respiratory Syncytial Virus (RSV). These antibodies are vital tools that enable accurate detection and characterization of RSV infections, crucial for diagnostic and research applications.

Epitope Binning Insight: Unraveling Binding Specificity

Epitope binning is vital for selecting the right antibody pairs in immunoassays. The data below highlights how selecting antibody pairs from distinct epitope bins enhances assay accuracy, sensitivity, and reliability. Antibodies from different bins are less likely to compete or interfere with each other's binding, resulting in minimized background noise and improved precision. This optimized combination of antibodies ensures harmonious interactions, ultimately elevating the overall quality of the immunoassay results.

		Second Antibody												
		RSV-3H5	RSV-1E9	RSV-3B10	RSV-3F4	RSV-3F6	RSV-3F1	RSV-3B2	RSV-3B5	RSV-3D7	RSV-3D9	RSV-3H7	RSV-3F2	RSV-3D6
First Antibody	RSV-3H5	Orange	Orange	Orange	Orange	Orange					Orange	Orange		
	RSV-1E9	Orange	Orange	Orange	Orange	Orange					Orange	Orange		
	RSV-3B10	Orange	Orange	Orange	Orange	Orange					Orange	Orange		
	RSV-3F4	Orange	Orange	Orange	Orange	Orange					Orange	Orange		
	RSV-3F6	Orange	Orange	Orange	Orange	Orange					Orange	Orange		
	RSV-3F1					Orange					Orange	Orange		
	RSV-3B2						Orange	Orange	Orange	Orange	Orange	Orange		
	RSV-3B5						Orange	Orange	Orange	Orange	Orange	Orange		
	RSV-3D7						Orange	Orange	Orange	Orange	Orange	Orange		
	RSV-3D9						Orange	Orange	Orange	Orange	Orange	Orange		
	RSV-3H7										Orange	Orange		
	RSV-3F2										Orange	Orange		
	RSV-3D6						Orange				Orange	Orange	Orange	

Figure A: Analysis of epitope characterization for antibodies targeting the RSV nucleocapsid protein. The antibodies are categorized into groups based on whether they bind or do not bind. Additionally, the catalog number of each antibody is presented.

Potency in Action: EC50 Data

The EC50 data, signifying the concentration at which an antibody attains 50% maximum binding, holds significant importance within immunoassays. This measure provides a direct glimpse into the antibody's strength, sensitivity, and binding affinity—key factors for optimizing assays. With our antibody displaying a lower EC50 value, denoting elevated sensitivity and affinity, it exhibited robust binding efficacy even at a minimal concentration. This data aids in refining assay conditions, ensuring precise detection even in scenarios involving low-concentration analytes. By steering the choice of optimal antibody concentration and enhancing sensitivity, the EC50 data bolsters the accuracy and efficiency of our immunoassay, reinforcing its trustworthiness in practical applications.

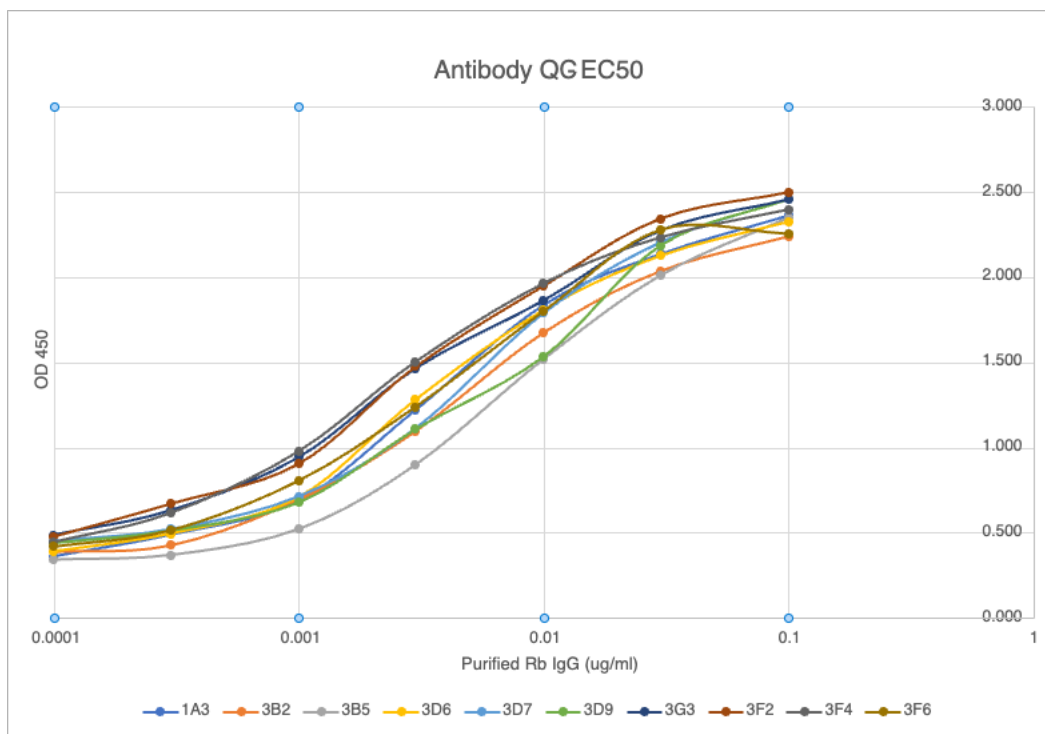


Figure B: EC50 assay of anti-NP RSV rabbit monoclonal antibodies. Full-length recombinant nucleocapsid protein was coated at 2 ug/ml. HRP conjugated goat anti-rabbit IgG antibody used for detection at 1:10,000. Data was modeled and analyzed with GraphPad-Prism.

Rigorous Quality Control ISO 17025:2017

We make sure our IVD grade antibodies meet the highest standards, and our ISO-controlled production process plays a key role. At every step, from making the antibodies to purifying them, we rigorously test to ensure they are consistent, reliable, and perform well. Following ISO standards means we have set procedures in place that help us maintain consistent quality, making sure every batch is just as good as the last. Our commitment to this process shows how dedicated we are to providing you with antibodies you can trust for your immunoassay need.

Respiratory Syncytial Virus

Human respiratory syncytial virus (RSV) is a member of the Paramyxoviridae family, subfamily Pneumovirinae, that causes common respiratory tract infections such as measles and mumps. Its genome consists of single stranded, negative sense RNA that encodes three envelope glycoproteins, a small hydrophobic (SH) protein of unknown function, a major glycoprotein (G) known as the attachment protein, and a fusion (F) protein. Its name comes from the fact that F proteins on the surface of the virus cause the membranes on nearby cells to merge, forming syncytia. While RSV typically produces mild symptoms in adults, it is one of the leading causes of lower respiratory tract infections and hospital visits during infancy and childhood.

