

12-8493: Anti-Respiratory Syncytial Virus (Clone: RSV-17E10) Biotin

Clonality :	Monoclonal
Clone Name :	RSV-17E10
Application :	ELISA
Alternative Name :	RSV, Orthopneumovirus
Isotype :	Human IgG1Lambda

Description

Specificity: RSV-17E10 activity is directed against antigenic site IV of the RSV and hMPV fusion (F) proteins and binds to pre- and post-fusion F proteins of RSV A strain A2 and RSV B strain 18537. Antibody RSV-17E10 is also capable of neutralizing RSV A2, RSV Long viruses (subgroup A), RSV 18537 B, and RSV WV/401R viruses (subgroup B). Competition-binding assay shows that RSV-17E10 targets antigenic site IV. The mode of action is independent of R429. RSV-17E10 is cross-reactive with hMPV F at antigenic site IV and neutralizes hMPV better than RSV. Cross-neutralization of RSV and hMPV is associated with recognition of the G430 and I432 residues, which are shared between RSV and hMPV F proteins. RSV-17E10 binds at a unique ~56° tilt, which may be a determinant of cross-reactivity with hMPV F.

Antigen Distribution: F protein is a surface glycoprotein.

Background: Respiratory syncytial virus (RSV) is a common respiratory virus that infects the majority of children by two years old^{1, 2}. While usually mild, RSV can be serious in infants and older adults and is the leading cause of bronchiolitis and pneumonia in children less than one year of age in the United States¹. A related pneumovirus, human metapneumovirus (hMPV), also significantly contributes to hospitalizations resulting from lower respiratory tract infection². Antibodies have been described that bind and neutralize both RSV and hMPV fusion (F) proteins. RSV F protein is a type I integral membrane protein that is synthesized as a 574 amino acid inactive precursor, assembled into a trimer, post-translationally modified, then cleaved to produce F1, F2, and intervening peptide pep273. Functional F protein has both pre- and post-fusion conformations. RSV F protein is highly conserved among RSV isolates from both A and B subgroups³ and is the primary target for antiviral drug development³ with several antigenic regions capable of introducing neutralizing antibodies². RSV and hMPV F protein share ~36% sequence similarity. Human monoclonal antibody (mAb) RSV-17E10 was generated against post-fusion RSV F using human hybridoma technology². RSV-17E10 binds to pre- and post-fusion F proteins of RSV A strain A2 and RSV B strain 18537 and is capable of neutralizing RSV A2, RSV Long viruses (subgroup A), RSV 18537 B, and RSV WV/401R viruses (subgroup B). Competition-binding assay shows that RSV-17E10 targets antigenic site IV. The mode of action is independent of R429. RSV-17E10 is cross-reactive with hMPV F at antigenic site IV and neutralizes hMPV better than RSV. Cross-neutralization of RSV and hMPV is associated with recognition of the G430 and I432 residues, which are shared between RSV and hMPV F proteins. RSV-17E10 binds at a unique ~56° tilt, which may be a determinant of cross-reactivity with hMPV F.

Product Info

Amount :	100 µg / 250 µg
	Purity : ≥95% monomer by analytical SEC
Purification :	Preparation : Recombinant antibodies are manufactured in an animal free facility using only in vitro protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.
	Concentration: 0.5 mg/ml
Content :	Formulation: This recombinant monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Storage condition :

Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one year. For longer term storage, aseptically aliquot in working volumes without diluting and store at -80°C. Avoid Repeated Freeze Thaw Cycles.

Application Note

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