Leinco Technologies, Inc.
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Influenza A HA Antibody

Purified No Carrier Protein

Recombinant Monoclonal Antibody

Product Information

Product No.:	LT578
Clone:	FluA-20
Isotype:	Human IgG1
Storage:	Sterile 2 to 8°C

Product Description

Specificity:
FluA-20 activity is directed against a novel epitope at the trimer interface of the hemagglutinin (HA) head domain of most influenza A viruses. Furthermore this antibody binds to HA trimers from a wide array of strains (H1, H2, H3, H4, H5, H6, 2/3 of H7 strains tested, H8, H9, H10, H11, H12, H14, H15) but not H16.

Structural studies of FluA-20 with the HA head domain revealed a novel epitope that is mostly buried in the peripheral interface of the native HA trimer on the non-receptor-binding site side of the 220-loop, adjacent to the 90-loop1. Many FluA-20 to HA contacts are centered on Arg229, and alanine mutation of Arg229 abolishes binding. Other mutations, at residues Arg220, Val223 or Pro96, also substantially decrease binding. These results are similar in H1, H3, and H5 strains. The key residues recognized by FluA-20, Pro96, Arg220, Pro221, Val223, and Arg229, are highly conserved across diverse subtypes.

Antigen Distribution:
HA is on the viral surface.

Background:
Hemagglutinin (HA) is a glycoprotein on the Influenza A (IAV) viral surface1. HA consists of two domains: an antigenically variable head and a more conserved stem. There are 18 HA subtypes. Neutralizing antibodies targeting the head domain are typically restricted to within subtype, while antibodies targeting the stem offer broader protection. In contrast, FluA-20 is a human antibody that recognizes the HA head domain of nearly all subtypes of IAV with high affinity1.

Known Reactivity Species:
Influenza A Virus, Virus

Expression Host:
HEK-293 Cells

Format:
Purified No Carrier Protein

Immunogen:
FluA-20 was generated from peripheral blood samples obtained from a vaccinated donor1.

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.

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Purity
≥90% monomer by analytical SEC and SDS-Page

Storage and Stability
This antibody may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.
Avoid Repeated Freeze Thaw Cycles.

Product 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.

Other Applications Reported in Literature:
ELISA
FC

Country of Origin
USA

References
1) 1. Bangaru S, Lang S, Schotsaert M, et al. Cell. 177(5):1136-1152.e18. 2019.