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12-8271: Anti-Vaccinia Virus (Clone: VACV-301)-Purified No Carrier Protein

Clonality : Monoclonal
Clone Name : VACV-301
Application : ELISA
Isotype : Human IgG1Lambda

Description

Specificity: VACV-301 activity is directed against the A27 antigen.
Antigen Distribution: A27 is expressed on the mature virion particle surface.
Background: Vaccinia virus (VACV) is a member of the Orthopoxvirus genus, which includes cowpox virus (CPXV), monkeypox virus (MPXV), and variola virus (VARV)1. Orthopoxviruses have a large and complex proteome, and various species share genetic and antigenic features. Indeed, an infection with one orthopoxvirus species, or vaccinia virus vaccination, protects against infection by other orthopoxviruses1,2,3. During infection, VACV has two antigenically distinct forms: mature virions (MV) or enveloped virions (EV). VACV-301 was generated from peripheral blood mononuclear cells (PMBC) obtained from donors who had survived MPXV infection or been immunized against vaccinia1. PMBCs were transformed with Epstein-Barr virus, screened by ELISA against orthopoxvirus antigens, and used to generate hybridomas. Hybridoma supernatants were tested for reactivity against each of 12 recombinant VACV antigens designated A21, A27, A28, A33, B5, D8, F9, J5, H2, H3, L1, and L5. A33 and B5 are surface antigens on EV; the rest are surface antigens on MV. Cross-reactivity against inactivated lysates of VACV-, CPXV-, and MPXV-infected cell monolayer cultures was also assessed. VACV-301 targets A27 on the MV particle surface and reacts to VACV antigen and lysate, CPXV lysate, MPXV antigen and lysate, and VARV antigen but not lysate1. In addition, VACV-301 binds to purified antigen from VACV, MPXV, and VARV as well as virus-infected cell lysates from VACV, CPXV, and MPXV to a lesser degree. Furthermore, VACV-301 strongly neutralizes VACV MV and MV plus complement (+C?), weakly neutralizes CPXV MV+C? but not MV alone, and neutralizes MPXV MV+C? more strongly than MV alone. When VACV-301 is mixed with other mAbs, neutralization and cross-neutralization are more efficient than in individual assays1. These mAb mixes also provide protection against VACV in mice. VACV-301 was also independently capable of preventing mortality and severe weight loss in C57BL/6 mice. VACV-301 is of the IgG3 isotype.

Product Info

Amount :	1 mg / 250µg
Purification :	Purity: >=90% monomer by analytical SEC and SDS-Page 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.
Content :	Concentration: >=1.0 mg/ml 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 :	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.

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Application Note

ELISA N