

## Anti-Orthopoxviruses (incl Ectromelia & Monkeypox) [VACV-5B1] Standard Size Ab02220-15.0

This antibody does not have a J-chain and therefore presents as a hexamer, rather than a pentamer.

This chimeric human antibody was made using the variable domain sequences of the original Mouse IgG2a format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Human IgM, Kappa

**Clone Number:** VACV-5B1

**Alternative Name(s) of Target:** Orthopoxvirus; Monkeypox; Ectromelia virus; ECTV; ECTV-5B1/2G6; EM-5B1/2G6; Mab EX-uUI 5BA 05.11.20

**UniProt Accession Number of Target Protein:**

**Published Application(s):** Immunogold electron microscopy, IP, WB, ELISA, FC, IF

**Published Species Reactivity:** Orthopoxviruses

**Immunogen:** The original mouse IgG2a version of this antibody was raised against sucrose-gradient purified Ectromelia virus (ECTV) Strain Munich 1.

**Specificity:** This antibody recognizes ECTV and some other orthopoxviruses. Its epitope is localized on a tetrapeptide located at the VACV homologue A27 (C-terminal epitope #5 (aa 68-71) (Ahsendorf et al., 2019; pmid: 31146446). Ectromelia virus (ECTV) is a virus of the family Poxviridae and the genus Orthopoxvirus that causes mousepox, a disease of mice. Mousepox causes skin lesions and generalized disease, which can be fatal. Orthopoxvirus has been associated with smallpox, cowpox, horsepox and monkeypox.

**Application Notes:** This antibody is recommended for the detection and analysis of Orthopox viruses, especially Ectromelia virus (ECTV). It binds to the epitope on the virus which seems not to be engaged with viral cell fusion (Ahsendorf et al., 2019; pmid: 31146446). VACV-5B1 (5B1/2G6) is a non-neutralizing clone that can be utilized for the detection of the analog of A27 protein on Orthopoxviruses (Ahsendorf et al., 2019; pmid: 31146446). This antibody's antigenic site is located in a functionally very important area within the C-terminus of the A27 protein; in this hydrophilic region, the two cysteines at positions 71 and 72 are responsible for formation of disulfide bonds and, therefore, play an important role for a functionally active trimeric A27 structure (Ahsendorf et al., 2019; pmid: 31146446). Mouse IgG2a version of this clone (EM-5B1/2G6) was also used to develop an ELISA capture assay as a capture antibody and was shown to be superior in detecting Orthopox viruses in comparison with other monoclonal and polyclonal clones (Johann

and Czerny, 1993; pmid: 8122446). It makes it a very good candidate for the development of an anti-orthopox viruse detection assay.

**Antibody First Published in:** Burck et al. Antigenic and genetic differentiation of avian poxviruses (Antigene und genetische Differenzierung von Avipockenviren) Vet. Med. Diss. 1-168, Munich. [PMID:](#)

**Note on publication:** Describes the characterization of this antibody.

## Product Form

**Size:** 50 µg Purified antibody.

**Purification:** Affinity Purified using a recombinant lectin column

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.