

## **MPXV B6R Antibody**

### **Purified No Carrier Protein**

### **Recombinant Monoclonal Antibody**

#### **Product Information**

**Product No.:** LT555

**Clone:** MPXV-13

**Isotype:** Human IgG1

**Storage:** Sterile 2-8°C

#### **Product Description**

##### **Specificity:**

Anti-MPXV B6R (clone name: MPXV-13) is reactive against the EV membrane protein encoded by ORF B6R of monkeypox virus (Homologous to Vaccinia virus B5R). This antibody also reacts to VACV antigen and lysate, CPXV lysate, MPXV lysate, and VARV antigen and lysate. MPXV-13 weakly binds to VACV purified antigen, VACV and MPXV virus-infected cell lysates, and strongly binds VARV purified antigen and CPXV virus-infected cell lysate. MPXV-13 neutralizes VACV EV plus complement (+C') but not MV, MV+C', or EV. MPXV-13 also neutralizes to CPXV MV+C'. MPXV-13 does not neutralize MPXV MV, MV+C', EV, or EV+C'.

Complementary screening approaches were used to identify orthopoxvirus-specific mAbs to MPXV, cowpox virus (CPXV), variola virus (VARV), and vaccinia virus (VACV).

##### **Antigen Distribution:**

B5 is a surface antigen on the enveloped virion.

##### **Background:**

Monkeypox virus (MPXV) is a zoonotic member of the Orthopoxvirus genus in the Poxviridae family<sup>1</sup>. It is the next most pathogenic poxvirus after smallpox. Two genetic clades, West African and Central African (Congo Basin), have been characterized; the latter is capable of human-to-human transmission<sup>1,2</sup>. Monkeypox has gained clinical relevance due to the eradication of smallpox, which has created opportunities for increased prevalence and viral mutations that may affect virulence<sup>1, 2</sup>. Rodents are thought to be the natural reservoir, with transmission through contact with bodily fluids and feces. Case fatality rates are 1,2. An infection with one orthopoxvirus of any one species, or vaccinia virus vaccination, protects against infection by other orthopoxviruses<sup>3,4,5</sup>.

MPXV is an enveloped virus with a linear, double-stranded DNA genome<sup>2</sup> and a large, complex proteome of over 200 proteins<sup>6</sup>. During infection, the virus exists in two antigenically distinct forms: mature virions (MV) or enveloped virions (EV)<sup>6</sup>.

##### **Known Reactivity Species:**

Monkeypox, Virus

##### **Expression Host:**

HEK-293 Cells

##### **Format:**

Purified No Carrier Protein

##### **Immunogen:**

Sequenced from PBMCs from a donor who had recovered from a naturally-occurring MPXV infection

##### **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.

# Product Datasheet

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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

N

## Country of Origin

USA

## References

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3. McConnell S, Herman YF, Mattson DE, et al. Am J Vet Res. 25:192-195. 1964.
4. Hammarlund E, Lewis MW, Carter SV, et al. Nat Med. 11(9):1005-1011. 2005.
5. Gilchuk I, Gilchuk P, Sapparapu G, et al. Cell. 167(3):684-694.e9. 2016.
6. Moss B. Immunol Rev.239:8–26. 2011.