

**Chikungunya Mutant (A226V) E1**

CHIKV Mutant (A226V) E1  
recombinant, insect cells

Cat. No.	Amount
PR-1284	10 µg

**For general laboratory use.**

**Shipping:** shipped on gel packs

**Storage Conditions:** store at -20 °C

**Additional Storage Conditions:** avoid freeze/thaw cycles

**Shelf Life:** 12 months

**Purity:** > 95 % (SDS-PAGE)

**Form:** liquid (Supplied in 1x PBS, pH 7.4, 0.1% Thimerosal, 5 mM EDTA, 1 µg/ml of Leupeptin, Aprotinin and Pepstatin A)

**Applications:**

ELISA and Western Blot.

**Description:**

Recombinant Chikungunya Mutant (A226V) E1 produced in Insect Cells is a polypeptide chain containing amino acids 1-415, however at position 226 the Alanine of the wild-type CHIKV E1 gene was mutated to Valine.

Chikungunya virus (CHIKV) is an arthropod-borne virus which is a member of the Alphavirus genus belonging to the Togaviridae family. CHIKV nucleocapsid is comprised of a single-stranded plus-sense RNA genome of approximately 11.8 kb. The CHIKV virion envelope consists of a lipid bilayer derived from the plasma membrane from the host cell, multiple copies of 2 major virus encoded glycoproteins E1 and E2, and a small 6K peptide. Proteins E1 and E2 both have a Molecular Weight of roughly 50kDa and form a heterodimer anchored in the membrane. Chikungunya virus infection causes an illness with symptoms similar to those of the dengue fever with an acute febrile phase lasting only 2-5 days, followed by a prolonged arthralgic disease affecting the joint extremities. Recent Chikungunya virus outbreaks presented a prospect for genetic analysis of patients with the illness, revealing a point mutation at the amino acid 226 (Ala mutated to Val) of the E1 gene. This point mutation was confirmed to be responsible for an improved capacity of CHIKV strains to infect and replicate in the *Aedes albopictus*, enabling virus transmission to a naive human population.

**Selected References:**

Kuo *et al.* (2012) Cell-based analysis of Chikungunya virus E1 protein in membrane fusion. *J Biomed Sci.* **19**:44.