

## Recombinant Chikungunya Mutant (A226V) E1 Protein

Catalog: A2323

Package: 100 µg  
Storage: ≤-20°C

FOR RESEARCH USE ONLY  
NOT FOR USE IN HUMANS



## Product Data Sheet

PD-A2323-Rev. A-10-2011

Name	Accession#	Source	Sequence Region	Molecular Weight	Purification	Application
CHIKV Mutant (A226V) E1 protein	FR846306.1	Insect cells	1-415 aa	~50 kDa	Affinity	ELISA, WB

### Background

Chikungunya virus (CHIKV) is an arthropod-borne virus belonging to the Alphavirus genus of the Togaviridae family. The nucleocapsid contains a single-stranded plus-sense RNA genome of about 11.8 kb. The virion envelope consists of a lipid bilayer derived from the plasma membrane from the host cell, multiple copies of two major virus encoded glycoproteins E1 and E2, and a small 6K peptide. Both E1 and E2 proteins have a molecular weight of approximately 50kDa and form a heterodimer anchored in the membrane.

CHIKV infection causes an illness with symptoms similar to dengue fever with an acute febrile phase lasting only two to five days, followed by a prolonged arthralgic disease affecting the joint extremities. Recent outbreaks of CHIKV provided an opportunity 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 shown to be responsible for an increased capacity of CHIKV strains to infect and replicate in the *Aedes albopictus*, facilitating virus transmission to a naive human population.

### Description

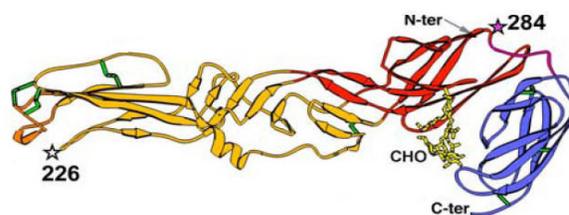
Alanine at 226 position of the wild-type CHIKV E1 gene (AA1-415) was mutated to Valine and cloned into the insect expression vector. The secreted, soluble recombinant protein was purified by immobilized metal-chelate affinity chromatography

**Concentration :** ≥ 1 mg/ml by Bradford dye assay

**Storage Buffer:** 1X PBS, pH7.4

**Preservatives:** 0.1% Thimerosal, 5 mM EDTA, 1µg/ml of Leupeptin, Aprotinin and pepstatin A

**Purity:** ≥ 95% on 12.5% SDS-PAGE



Putative ribbon diagram of E1 modeled from the crystal of SFV E1 *PLOS. 2006 (7):1058-1070*

**Shelf Life:** 12 months at recommended storage conditions

**Storage & Handling:** ≤ -20 °C. Avoid repeated freeze-thawing

**QC Testing:** Tested by SDS-PAGE per WI-71-01-3 & 4

### SDS-PAGE Analysis

