


RV gE1 Mosaic (residues 157-176/374-390/213-239)

 Rubella Virus Glycoprotein E1
 recombinant, *E. coli*

Cat. No.	Amount
PR-1228	100 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, RP-HPLC)

Form: liquid (Supplied in 1x PBS)

Applications:

Antigen in ELISA and Western blots, excellent antigen for detection of Rubella virus with minimal specificity problems.

Description:

The protein contains glycoprotein E1 immunodominant fragments, amino acids: 157-176, 213-239, and 374-390. The protein is purified by proprietary chromatographic technique.

Background: Rubella virus is an enveloped positivestrand RNA virus of the family *TOGAVIRIDAE*. The genome encodes two open reading frames (ORFs): the 5'-proximal ORF encodes viral nonstructural proteins (NSP) that are responsible for viral genome replication, while the 3'-proximal ORF encodes three virion structural proteins (SP), the capsid protein (CP), and the two envelope glycoproteins, E2 and E1. During virus assembly, the capsid interacts with genomic RNA to form nucleocapsids. The rubella virus (RV) structural proteins: capsid, E2, and E1 are synthesized as a polyprotein precursor. The signal peptide that initiates translocation of E2 into the lumen of the endoplasmic reticulum remains attached to the carboxy terminus of the capsid protein after cleavage by signal peptidase.

Specificity: Immunoreactive with all sera of Rubella virus-infected individuals.

Selected References:

Ramanujam *et al.* (2001) Effect of site-directed asparagine to isoleucine substitutions at the N-linked E1 glycosylation sites on rubella virus viability. *Virus Res.* **81**:151.

Qiu *et al.* (2000) Mutations in the E1 hydrophobic domain of rubella virus impair virus infectivity but not virus assembly. *J. Virol.* **74**:6637.

Corboba *et al.* (2000) Neutralizing monoclonal antibody to the E1 glycoprotein epitope of rubella virus mediates virus arrest in VERO cells. *Viral. Immunol.* **13**:83.

Yao *et al.* (2000) A single-amino-acid substitution of a tyrosine residue in the rubella virus E1 cytoplasmic domain blocks virus release. *J. Virol.* **74**:3029.

Yao *et al.* (1999) Mutational analysis, using a full-length rubella virus cDNA clone, of rubella virus E1 transmembrane and cytoplasmic domains required for virus release. *J. Virol.* **73**:4622.

Yang *et al.* (1998) Effects of mutations in the rubella virus E1 glycoprotein on E1-E2 interaction and membrane fusion activity. *J. Virol.* **72**:8747.