Apple Stem Grooving Virus (ASGV) ELISA Testing Reagents and Kits

Information About the Testing Kits and Reagents

**Source Antibody:** A rabbit polyclonal antibody for both capture and detection.

**Test Format:** DAS ELISA

**Reactivity:** The test reacted with all ASGV isolates tested. Reaction of the ELISA is moderate strong. Optical Density at 405 nm is in range of 0.400 - >1.700 depending on the virus titer in the samples tested.

**Sensitivity:** Sensitivity of the ELISA is moderate high. The virus can be consistently detected in infected plant tissues diluted at 1:30 -1:90.

**Specificity:** There is no cross reaction with healthy plant tissues such as apple or other host plants. Background is low on all of the negative control wells.

**Pricing Information**

<table>
<thead>
<tr>
<th>Cat. #</th>
<th>Description</th>
<th>100 wells</th>
<th>500 wells</th>
<th>1000 wells</th>
<th>5000 wells</th>
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</thead>
<tbody>
<tr>
<td>A0128K</td>
<td>ELISA Kit, Alkaline Phosphatase</td>
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<tr>
<td>A0128R</td>
<td>ELISA Reagents, Alkaline Phosphatase</td>
<td>$85</td>
<td>$230</td>
<td>$395</td>
<td>$1590</td>
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<td>A0128CA</td>
<td>Coating Antibody</td>
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<tr>
<td>A0128DA</td>
<td>Detecting conjugate, Alkaline Phosphatase</td>
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<tr>
<td>LS100</td>
<td>Buffers for DAS/TAS, alkaline phosphatase</td>
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<td>A0128P</td>
<td>Positive Controls for 20 Wells</td>
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<td>$20</td>
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<tr>
<td>A0128N</td>
<td>Negative Controls for 20 Wells</td>
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Additional Information About the Virus

Name: Apple Stem Grooving Virus (ASGV)
Synonyms: Virginia Crab stem grooving virus, chenopodium dark green epinasty virus, brown line disease virus.
Group/Genus: Capillovirus

Vector: Transmitted by means not involving a vector.
Transmission: Virus transmitted by mechanical inoculation (from apple, especially in spring, by inoculating extracts from buds, young leaves or petals ground in 0.05 M phosphate buffer, pH 7-8. Additives such as 2% (w/v) nicotine base or 2% (w/v) PVP or hide powder help but are not essential); transmitted by grafting; transmitted by seed (in Chenopodium quinoa).

Main natural host plants: Malus sylvestris


Diagnostically susceptible host species and symptoms: Malus sylvestris cv. Virginia Crab - grooves in the wood. Strain ‘E-36’ causes graft union to be brown, fragile, swollen and sunken areas on the stem; Chenopodium quinoa - etched necrotic local lesions, systemic chlorotic rings and mottle, tip malformed; some isolates induce epinasty; Nicotiana glutinosa - systemic yellow mosaic, line patterns; Phaseolus vulgaris - purple brown spots, chlorotic local lesions, systemic necrosis.

Geographical distribution: Probably distributed worldwide. Spreads in Australia, China, India, Italy, Japan, the Netherlands, New Zealand, Portugal, and the UK (probably occurs wherever apple trees are cultivated).

References