

Product Information: DAS-ELISA

Apple stem pitting virus (ASPV)

Synonym: Pear vein yellows virus (PVYV)

ASPV (1) (Synonym: Pear vein yellows virus (PVYV)) occurs world-wide. Infection is usually latent in many cultivars and goes unnoticed, despite its high frequency. The virus causes significant, though insidious losses. Often in complex with other latent apple diseases (ACLSV, ASGV, etc.) this affection is the main cause of a decrease in yield quality and quantity. The fruits of infected trees show more russetting and the trees are more fragile and sensitive to canker and nutrient deficiency. ASPV is not epidemic, but is transmitted by grafting.

Specificity and sampling instruction

The reagents in the DAS-ELISA format are detecting ASPV as well as PVYV in dormant and in growing tissue of apple and pear trees. ASPV and PVYV apparently are the same virus causing different diseases on apple and pear (3,4). The reagents contain monoclonal antibodies that were developed against the Swiss isolate 953 (2). All isolates tested so far (isolates from 3 different continents) were detected. The concentration of ASPV (or PVYV) in tissues of fruit trees may vary considerably. Scrapings from dormant wood in winter or mature wood and older leaves during summer are good tissue sources. Detection from dormant wood is also possible after several months of storage at low temperature; i.e., ca. 4-8°C refrigeration (2). Samples are homogenized 1:20 (w/v) in our extraction buffer «General» (Art. No. 110120).

The product was developed in cooperation with Agroscope, the Swiss centre of excellence for research in the agriculture and food sector.

Information on the antibodies

Coating IgG: monoclonal; conjugate: monoclonal

References

- (1) Brunt, A.A., Crabtree, K., Dallwitz, M.J., Gibbs, A.J., Watson, L. and Zurcher, E.J. (eds.) (1996 onwards). 'Plant Viruses Online: Descriptions and Lists from the VIDE Database. Version: 16th January 1997.'
- (2) Gugerli, P., and Ramel, M.E. 2003. 19th International Symposium on Virus and Virus-like Diseases of Temperate Fruit Crops, Valencia, Spain, July 21-25, 2003; and Acta Horticulturae 657:59-69.
- (3) Leone, G., Lindner, J.L., van der Meer, F.A., and Schoen, C.D. 1998. Acta Horticulturae 472:61-65.
- (4) Schwarz, K., and Jelkmann, W. 1998. Acta Horticulturae 472:75-85.

Ordering Information

BIOREBA offers the following formats:

Individual ELISA reagents for 96, 480 or 960 assays: IgG and/or conjugate for the working volume of 200 µl/test/well.

Reagent sets for 480 or 960 assays: IgG and conjugate, positive and negative controls, and microtiter plates (F-96) for a working volume of 200 µl/test/well.

Complete kits for 96, 480 or 960 assays: All reagents, controls, microtiter plates (F-96), buffers, and substrate necessary for a working volume of 200 µl/test/well.

ELISA buffers, equipment for sample preparation and disposables are also available.

For all Art. No. please refer to our product catalogue or our homepage www.bioreba.com and for prices and further information on any other product from BIOREBA, please contact your local distributor or our office in Switzerland.

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Adaptations from last version: new synonym added.