

Product Information: DAS-ELISA

Potato virus A (PVA)

Synonym: Potyvirus atuberosi

PVA (1) is one of the most widespread potato viruses and is found in most potato growing areas. The virus may lower yield slightly. In combination with other viruses, it can cause severe diseases (depending on varieties) and yield reduction. Aphids are responsible for virus spread.

Specificity and sampling instruction

These reagents consist of different monoclonal antibodies developed against PVA isolates from potato plants; the coating antibody was developed against a Swiss isolate from «Advira» (3), the conjugate reagent consists of 2 different antibodies raised against a Scottish isolate from «Red Pontiac» (2; and R. Burns, personal communication). The reagents react specifically with PVA. All known isolates of PVA are detected and no crossreaction with any other known potato virus has been observed. For all potato reagents, we recommend our extraction buffer «General» (Art. No. 110120) for testing leaf samples at a ratio of 1:20 (w/v). For testing sprouted tuber samples (sprouts of potato), a special extraction buffer «Bulbs & Tubers» (Art. No. 110122), containing egg albumin (ovalbumin), is used at a ratio of 1:10 to 1:20 (w/v; 3,4).

This product has been developed in cooperation with Agroscope, the Swiss centre of excellence for research in the agriculture and food sector; and the Scottish Agricultural Science Agency (SASA), Edinburgh, UK.

Information on the antibodies

Coating IgG: monoclonal; conjugate: monoclonal

References

- (1) Bartels, R. 1971. Descriptions of plant viruses. No. 54. CMI/AAB. 4 pp.
- (2) Browning, I. A., Burns, R., George, E.L., and Darling, M. 1995. EPPO Bulletin (25):259-268.
- (3) Gugerli, P. 1979. Potato virus A and potato leafroll virus: Purification, antiserum production and serological detection in potatoe and test plants by enzyme-linked immunosorbent assay (ELISA).Phytopath.Z.96:97-107.
- (4) Gugerli, P. 1986. In H.U. Bergmeyer: Methods of Enz. Analysis. Vol. XI. pp. 430-446.

Ordering Information

BIOREBA offers the following formats:

Individual ELISA reagents for 100, 500, 1000 or 5000 assays: IgG and/or conjugate for the working volume of 200 µl/test/well.

Reagent sets for 480, 960 or 5000 assays: IgG and conjugate, positive and negative controls, and micro-titer plates (F-96) for a working volume of 200 µl/test/well.

Complete kits for 96, 480, 960 or 5000 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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Version: 5 - 09.05.2025

Adaptations from last version: added revised taxonomy of ICTV and assays of individual ELISA reagents.