Product Information: DAS-ELISA

Tobamovirus broad spectrum (Tobamo)

The genus *Tobamovirus* (1) contains plant viruses that infect important crops such as tomato (2), pepper, tobacco, and cucumber. Infection with Tobamoviruses can cause mosaic patterns, leaf deformation, stunting, and fruit defects, leading to significant yield and quality losses making them economically relevant pathogens. Tobamoviruses are among the most stable plant viruses and are efficiently transmitted through mechanical contact, contaminated tools, plant debris, and infected seed lots (3). Emerging species such as Tomato brown rugose fruit virus (ToBRFV) have become a major threat because they can overcome previously effective resistance genes in tomato varieties (2, 4).

Specificity and sampling instruction

This DAS-ELISA is based on a mixture of polyclonal antibodies developed against different Tobamoviruses. The reagent is suitable for detecting Tobamoviruses in plant leaves, seeds and fruits. Leaf and fruit samples are homogenized 1:20 (w/v) in extraction buffer "General" (Art. No. 110120). Seed samples soaked at 4°C for 4 hours in a dilution of 1:20 (w/v) in extraction buffer «General» followed by homogenization

The Tobamo DAS-ELISA reagents recognize the following Tobamoviruses (list not exhaustive):

- Bell pepper mottle mosaic virus (BPeMV)
- Cucumber green mottle mosaic virus (CGMMV)
- Pepper mild mottle virus (PMMoV)
- Sunn-hemp mosaic virus (SHMV)
- Tobacco mild green mosaic virus (TMGMV)
- Tobacco mosaic virus (TMV)
- Tomato brown rugose fruit virus (ToBRFV)
- Tomato mottle mosaic virus (ToMMV)
- Tomato mosaic virus (ToMV)
- Turnip vein clearing virus (TVCV)

Information on the antibodies

Coating IgG: polyclonal; conjugate: polyclonal

References

(1) International Committee on Taxonomy of Viruses (ICTV). *Genus: Tobamovirus*. Available at: https://ictv.global/report/chapter/virgaviridae/virgaviridae/tobamovirus.

(2) Saito, T. et al. 2024. *Tobamoviruses: old and new threats to tomato cultivation*. Journal of Plant Diseases and Protection.

(3) Dombrovsky A, Smith E. 2017. *Seed Transmission of Tobamoviruses: Aspects of Global Disease Distribution* [Internet]. Advances in Seed Biology. InTech; 2017. https://doi.org/10.5772/intechopen.70244.

(4) Salem N, Mansour A, Ciuffo M, Falk BW, Turina M. 2016. *A new tobamovirus infecting tomato crops in Jordan*. Arch Virol. 2016 Feb; 161(2):503-6. doi: 10.1007/s00705-015-2677-7. Epub 2015 Nov 19. PMID: 26586328.

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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