

Validation report

DAS-ELISA BCMNV

Article No.: 162177 (BCMNV Complete kit 96) / 162175 (BCMNV Complete kit 480) / 162172 (BCMNV Complete kit 960)

General information:

Target Pathogen	BCMNV (Bean common mosaic necrosis virus / Potyvirus phaseoli)
Genus	<i>Potyvirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a BCMNV isolate from Ruanda.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "general".
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized BCMNV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, seed Seed transmission is possible. Transmission by vectors (aphids).
Tested species infected	<i>Nicotiana Benthamiana</i> (Tobacco) <i>Phaseolus vulgaris</i> (Bean)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	32
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	56
Detected isolates / geographic regions (Inclusivity)	BCMNV VE5 1230 (Switzerland, Tobacco) BCMNV VE5 1230 (Switzerland, Bean)
Cross reaction with (Exclusivity)	Weak cross-reaction with the following potyvirus members is possible: BCMV (Bean common mosaic virus) Additional weak cross-reactions of members of the potyvirus family are possible.
No cross reaction tested with (Exclusivity)	ApP (Apple proliferation phytoplasma) ASGV (Apple stem grooving virus) CLRV (Cherry leaf roll virus) GPGV (Grapevine pinot gris virus) PMTV (Potato mop-top virus) PNRSV (Prunus necrotic ringspot virus) PVV (Potato virus V) TSV (Tobacco streak virus)

No matrix effect observed with (Selectivity)	<i>Nicotiana benthamiana</i> (Tobacco) <i>Phaseolus coccineus</i> (Runner bean) <i>Phaseolus vulgaris</i> (Bean) <i>Vigna unguiculata</i> (Cowpea)
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Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻³ dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	BCMNV on leaves of tobacco: 1:1'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	2003
External validation	-
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection, composed of various samples with diverse plant host range, collected within the last 40 years.

Validation release Date:
May 29th, 2026

QC manager:



Version: 1 – 29.05.2026.