

Validation report

DAS-ELISA Xcp

Article No.: 170177 (Xcp Complete kit 96) / 170175 (Xcp Complete kit 480) / 170172 (Xcp Complete kit 960)

General information:

Target Pathogen	Xcp (<i>Xanthomonas campestris</i> pv. <i>Perlargonii</i> / <i>Xanthomonas hortorum</i> pv. <i>pelargonii</i>)
Genus	<i>Xanthomonas</i>
Method	DAS-ELISA
Associated diseases	Bacterial leaf spot of pelargonium Bacterial blight of geranium

Technical information:

Antibodies	Polyclonal antibodies developed against Xcp strain multiplied in Switzerland.
Sampling	1:10 (w/v) in extraction buffer "General". Sampling: Stem and petioles at the lower part of the plant
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized Xcp infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, stems, petioles, bacterial ooze
Tested species infected	<i>Pelargonium x hortorum</i> (Geranium)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	>100
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100
Detected strains / geographic regions (Inclusivity)	Xcp BRD (Germany, Geranium) Xcp 88/5 (Germany, Geranium) Xcp 200219 (Switzerland, Geranium) Xcp 260424 (Switzerland, Geranium) Xcp D (Switzerland, Geranium) Xcp 86/81 (Switzerland, Geranium) Xcp 90/96 (Switzerland, Geranium) Xcp 007-18 (Switzerland, Geranium) Xcp 005-19 (Switzerland, Geranium) Xcp 063-23 (Switzerland, Geranium) Xcp 034-24 (Switzerland, Geranium)
Cross reaction with (Exclusivity)	Xcc (<i>Xanthomonas campestris</i> pv. <i>campestris</i>)
No cross reaction tested with (Exclusivity)	<i>Agrobacterium tumefaciens</i> <i>ApP</i> (Apple proliferation phytoplasma) <i>ArMV</i> (Arabis mosaic virus) <i>Erwinia carotovorum</i> subsp. <i>atroseptica</i> <i>Erwinia carotovorum</i> subsp. <i>carotovorum</i>

	<i>Erwinia chrysanthemi</i> <i>Erwinia herbicola</i> GPGV (Grapevine pinot gris virus) PFBV (Pelargonium flower break virus) PLPV (Pelargonium line pattern virus) <i>Pseudomonas cichorii</i> <i>Pseudomonas fluorescens</i> <i>Pseudomonas syringae</i> <i>Rhodococcus fascians</i> RpRSV (Raspberry ringspot virus) <i>Xanthomonas campestris</i> pv. <i>begoniae</i>
No matrix effect observed with (Selectivity)	<i>Pelargonium x hortorum</i> (Geranium) <i>Vitis vinifera</i> (Grapevine)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ³ – 10 ⁴ CFU per ml (pure bacteria culture diluted in ELISA extraction buffer)
Sensitivity on host matrix	-
Other sensitivity characteristics	-

Validation:

Internal validation	1993 (last internal validation)
External validation	Validation by 2 external research partners (Germany) in 1991 and 1994.
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection composed of various samples collected within the last 30 years.

Validation release Date:
July, 12th, 2024

QC manager:



Version: 1 – 12.07.2024