

Validation report

DAS-ELISA Rs

Article No.: 170577 (Rs Complete kit 96) / 170575 (Rs Complete kit 480) / 170572 (Rs Complete kit 960)

General information:

Target Pathogen	Rs (<i>Ralstonia Solanacearum</i>)
Genus	<i>Ralstonia</i>
Method	DAS-ELISA
Associated diseases	Brown rot of potato / moko disease of banana

Technical information:

Antibodies	Polyclonal antibodies developed against <i>Ralstonia Solanacearum</i> Race 3.
Sampling	1:10 – 1:20 (w/v) in extraction buffer "General". Potato & Pelargonium: samples from the lower portion of the main stem or at the base of the first lateral shoot.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized Rs infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, stems, stolon (Potato), tuber (Potato)
Tested species infected	<i>Lactuca sativa</i> (Lettuce) <i>Musa</i> (Banana) <i>Nicotiana tabacum</i> (Tobacco) <i>Pelargonium x hortorum</i> (Geranium) <i>Physalis peruviana</i> (Physalis) <i>Rosa</i> (Rose) <i>Solanum tuberosum</i> (Potato) <i>Syzygium aromaticum</i> (Cloves) <i>Zingiber officinale</i> (Ginger)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	45
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	22
Detected strains / geographic regions (Inclusivity)	Rs 030217 Race 1, Biovar 3 (Switzerland, Rose) Rs IPO 267 Race 3, Biovar 2 (Sweden, Potato) Rs D1-300317 (Netherlands, Rose) Rs D2-300317 (Netherlands, Rose) Rs 06-300317 (Netherlands, Potato) Rs 97-300317 (South America, Tobacco) Rs R1-300317 (Netherlands, Rose) Rs R2-300317 (Netherlands, Rose) Rs 06-86 (Netherlands)

	Rs 95/112 (Turkey) Rs IPO1657 Race 1, Biovar 1 (Brazil, Potato) Rs IPO1653 Race 1, Bv 3 (Costa Rica, Physalis) Rs IPO1654 Race 1, Biovar 4 (US, Ginger) Rs IPO1665 Race 2, Biovar 1 (Panama, Banana) Rs IPO1656 Race 1, Biovar 3 (France, Lettuce) Rs IPO1669 Race 1, Biovar 3 (France, Potato) Rs IPO 1670 Race 1, Biovar 3 (Indonesia, Potato) Rs IPO1658 Race 1, Biovar 4 (Japan, Potato) Rs IPO1655 Race 1, Biovar 3 (Panama, Banana) Rs IPO1666 Race2, Bv 1 (Costa Rica, Heliconia) Rs IPO933 Race 3, Biovar 2 (Egypt, Potato) Rs IPO1608 Race 3, Bv 2 (Netherlands, Potato) Rs IPO1609 Race 3, Bv 2 (Netherlands, Potato) Rs IPO1610 Race 3, Bv 2 (Netherlands, Potato) Rs IPO1661 Race 3, Biovar 2 (Egypt, Potato) Rs IPO1662 Race 3, Biovar 2 (India, Potato) Rs IPO1663 Race 3, Biovar 2 (France, Potato) Rs IPO1664 Race 3, Biovar 2 (Chile, Potato) Rs IPO1676 Race 3, Bv 2 (Netherlands, Potato) Rs IPO1677 Race 3, Bv 2 (Netherlands, Potato) Rs IPO1678 Race 3, Bv 2 (Netherlands, Potato) Rs IPO1681 Biovar 2 (UK, Potato) Rs IPO1684 Biovar 2 (UK, Potato) Rs IPO1809 Race 3 (Netherlands) Rs IPO1711 (France) Rs IPO1712 (France) Rs IPO1751 (Netherlands, Tomato) Rs IPO3732 (Kenya, Pelargonium) <i>Ralstonia Syzygii</i> S302 (Indonesia, Cloves)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	BYDV (Barley yellow dwarf virus) CLRV (Cherry leaf roll virus) Cms (<i>Clavibacter michiganensis sepedonicus</i>) Eca (<i>Erwinia carotovora atroseptica</i>) Ech (<i>Erwinia chrysanthemi</i>) Ecc (<i>Erwinia carotovora</i>) PVS (Potato virus S) SMV (Soybean mosaic virus) TNV (Tobacco necrosis virus) ToMV (Tomato mosaic virus) Xcp (<i>Xanthomonas campestris</i> pv. <i>pelargonii</i>)
No matrix effect observed with (Selectivity)	<i>Pelargonium x hortorum</i> (Geranium) Rosa (Rose) <i>Solanum tuberosum</i> (Potato)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁴ – 10 ⁶ CFU per ml (pure bacteria culture diluted in ELISA extraction buffer)
Sensitivity on host matrix	-
Other sensitivity characteristics	-

Validation:

Internal validation	2019 (last internal validation)
External validation	-
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