

# Validation Report: ELISA

SRA 70002 • *Clavibacter michiganensis* subsp. *sepedonicus* (Cms)



## Test Characteristics

<b>Test Name</b>	Clavibacter michiganensis subsp. sepedonicus	<b>Capture Antibody</b>	Monoclonal (Mouse)
<b>Catalog Number</b>	70002	<b>Detection Antibody</b>	Polyclonal (Rabbit)
<b>Acronym</b>	Cms	<b>Format</b>	DAS-ELISA
<b>Genus</b>	Clavibacter	<b>Diluents</b>	MEB/ECM
		<b>Sample Dilution</b>	1:10

## Summary

This ELISA test is a qualitative serological assay for the detection of *Clavibacter michiganensis* subsp. *sepedonicus* (Cms), the causal agent of Bacterial ring rot (BRR), in potato leaves and tubers. Composite samples of 200 tuber cores can be used and still achieve reliable results. Cms is a member of the *Clavibacter* genus known for their aerobic, non-motile, Gram-positive, non-sporing, curved rod shaped bacteria.

## Diagnostic Sensitivity

<b>True Positives</b>	47
<b>Correct Diagnoses</b>	47
<b>Percent</b>	100%

## Analytical Sensitivity

**Limit of Detection:** 2.0x10<sup>5</sup> cells/mL

## Analytical Specificity

### Inclusivity:

This assay was designed to detect all strains and isolates of Cms. Forty-seven distinct samples of Cms have been experimentally proven to be detected, including samples of mucoid and non-mucoid strains.

### Exclusivity:

#### Cross-reacts With:

None known
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#### Does Not Cross-react With:

Acidovorax avenae subsp. avenae	Acidovorax avenae subsp. citrulli (Aac)
Agrobacterium tumefaciens	Agrobacterium vitas
Burkholderia glumae (Bg)	Clavibacter michiganensis subsp. insidiosus (Cmi)
Clavibacter michiganensis subsp. michiganensis (Cmm)	Clavibacter michiganensis subsp. nebraskensis (Cmn)
Clavibacter michiganensis subsp. tessellarius (Cmt)	Curtobacterium flaccumfaciens subsp. poinsettiae
Dickeya chrysanthemi	Erwinia amylovora (Ea)
Erwinia tracheiphila	Pantoea agglomerans
Pantoea stewartii (Pstew)	Pectobacterium carotovora subsp. atroseptica (Patro)
Pectobacterium carotovora subsp. carotovora	Pseudomonas fuscovaginae
Pseudomonas savastanoi pv. phaseolicola (Psph)	Pseudomonas savastanoi pv. glycinea
Pseudomonas syringae pv. syringae (Pss)	Pseudomonas syringae pv. tomato (Pst)



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**Does Not Cross-react With:**

Ralstonia solanacearum (Rs)	Rhizobium radiobacter
Rhizobium rhizogenes	Spiroplasma citri (Sc)
Stenotrophomonas maltophilia	Xanthomonas albilineans (Xalb)
Xanthomonas arboricola pv. celebensis	Xanthomonas arboricola pv. pruni (Xap)
Xanthomonas axonopodis pv. begoniae (Xab)	Xanthomonas axonopodis pv. citri (Xac)
Xanthomonas axonopodis pv. dieffenbachiae (Xad)	Xanthomonas axonopodis pv. phaseoli
Xanthomonas campestris pv. armoraciae (Xcarm)	Xanthomonas campestris pv. campestris
Xanthomonas campestris pv. zinniae	Xanthomonas citri pv. aurantifolii
Xanthomonas hortorum pv. pelargonii (Xhp)	Xanthomonas oryzae pv. oryzae (Xoo)
Xanthomonas translucens pv. translucens	Xanthomonas citromelo
Xanthomonas fragariae	Xanthomonas perforans
Xanthomonas maltophilia	Xanthomonas vesicatoria
Xylella fastidiosa (Xf)	

**Diagnostic Specificity**

True Negatives 166  
 Correct Diagnoses 166  
 Percent 100%

**Selectivity:**

<b>No Matrix Effect Observed With:</b>			
Potato leaves	Potato tissue cultures	Potato tubers	Potato vascular tissues



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