Validation Report: ELISA

SRA 15500 • *Soybean dwarf virus* (SbDV)

Test Characteristics

Test Name	Soybean dwarf virus	**Capture Antibody**	Monoclonal (Mouse)
Catalog Number	15500	**Detection Antibody**	Polyclonal (Rabbit)
Acronym	SbDV	**Format**	DAS-ELISA
Genus	Luteovirus	**Diluents**	GEB/ECI
		Sample Dilution	1:10

Summary

This ELISA test is a qualitative serological assay for the detection of Soybean dwarf virus (SbDV) in legume leaves. Both the dwarfing (d) and yellowing (y) strains of SbDV were successfully detected. SbDV is a member of the Luteovirus genus known for their non-enveloped, spherical-shaped virus particles.

Diagnostic Sensitivity

True Positives	31
Correct Diagnoses	31
Percent	100%

Analytical Sensitivity

Limit of Detection: 1:300 dilution of infected tissue (pathogen titer unknown)

Analytical Specificity

Inclusivity:

Isolates and Geographic Regions Detected:

SbDV-dwarfing (SbDV-D)	SbDV-SCRL
SbDV-yellowing (SbDV-Y)	SbDV ATCC® PV-592™ (Japan) (SbDV-Y)

Exclusivity:

Cross-reacts With:

None known	

Does Not Cross-react With:

Alfalfa mosaic virus (AMV)	Bean common mosaic virus (BCMV)
Bean pod mottle virus (BPMV)	Broad bean wilt virus 1 and 2 (BBWV-1,2)
Beet western yellows virus (BWYV)	Cucumber mosaic virus (CMV)
Cucumber mosaic virus I (CMV I)	Cucumber mosaic virus II (CMV II)
Potyvirus (Poty)	Peanut stunt virus (PSV)
Southern bean mosaic virus (SBMV)	Soybean mosaic virus (SMV)
Tobacco mosaic virus (TMV)	Tobacco mosaic virus, common strain (TMV-c)
Tobacco rattle virus (TRV)	Tobacco ringspot virus (TRSV)
Tobacco streak virus (TSV)	Tomato ringspot virus (ToRSV)
Tomato spotted wilt virus (TSWV)	

Diagnostic Specificity

True Negatives	24
Correct Diagnoses	24
Percent	100%

Selectivity:

No Matrix Effect Observed With:			
Bean leaves	Clover leaves	Snap bean leaves	Soybean leaves