FMD Vaccine Matching Strain Differentiation Report

Lab Reference Batch Number: WRLFMD/2026/000001

Date Received: 28/01/2026

Country of Origin*: South Africa

Sender*:

[redacted]

Number Tested: 7

Diagnostic work has now been completed in respect of the samples you submitted and the details are as attached.

Notes:

This report has been updated to include results for SAT2 Eritrea 98, Boehringer Ingelheim and SAT3 2017 Biogenesis Bago vaccine matching data.
Per request from the manufacturer we have removed the data for SAT3 Zim 83, Boehringer Ingelheim as they are in the process of producing more representative BVS.

To help us improve the quality of our service, please send any suggestions or requests to the Reference Laboratories by email (reporting@pirbright.ac.uk).

Report Number: 14841

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FMD Vaccine Matching Strain Differentiation Report - Replacement

Lab Reference Batch Number: WRLFMD/2026/000001 **Report Date:** 22/04/2026

Report Number: 14841 This report replaces Report Number: 14432

Date Tests Completed: 16/04/2026 **Country of Origin*:** South Africa

2dm VNT r_1 RESULTS

	SAT1 SAR/2/2025	SAT1 SAR/6/2025	SAT1 SAR/8/2025	SAT2 SAR/3/2024	SAT2 SAR/4/2025	SAT3 SAR/1/2024	SAT3 SAR/2/2024
SAT1 2020,Biogénesis Bagó	0.26, 2.03	0.10, 1.62	0.08, 1.51				
SAT1 IRQ 2025, Dollvet	0.09, 1.81	0.34, 2.39	0.26, 2.27				
SAT1 Rho 78, Boehringer Ingelheim	0.34, 2.19	0.38, 2.24	0.38, 2.24				
SAT1/BOT 1/1977, Dollvet	0.19, 1.91	0.38, 2.20	0.32, 2.13				
SAT1/HWANGE/1994, Dollvet	0.16, 2.39	0.07, 2.06	0.08, 2.09				
SAT2 ERI/12/1998, Dollvet				0.71, 2.71	0.76, 2.60		
SAT2 Eritrea 98, Boehringer Ingelheim				0.77, 2.09	1.00, 2.25		
SAT2 IRQ 2023, Dollvet				0.17, 1.94	0.23, 1.93		
SAT2 OMN 2015 Biogénesis Bagó				0.40, 2.40	0.33, 2.33		
SAT2 Zim 83, Boehringer Ingelheim				0.53, 2.62	0.36, 2.51		
SAT3 2017, Biogénesis Bagó						0.60, 2.37	0.49, 2.28
SAT3/ZAM 9/2018, Dollvet						0.76, 2.56	0.44, 2.25

Interpretation of Results

For each field isolate the r_1-value is shown followed by the heterologous neutralisation titre (r_1-value, titre)

The r_1-values shown below, represent the one-way serological match between vaccine strain and field isolate, calculated from the comparative reactivity of an antiserum, raised against the vaccine in question, to the vaccine virus and the field isolate.

r_1 greater than 0.3 - suggest that there is a close antigenic relationship between field isolate and vaccine strain. A potent vaccine containing the vaccine strain is likely to confer protection.

r_1 less than 0.3 - suggest that the field isolate is antigenically different to the vaccine strain. Where there is no alternative, the use of this vaccine should carefully consider vaccine potency, the possibility to use additional booster doses and monitoring of vaccinated animals for heterologous responses.

0 = no neutralisation for the field virus was observed at a virus dose of a 100 $TCID_{50}$

Heterologous neutralisation titres for the field isolates are included as an indicator of protection.

NOTE: Vaccines from different manufactures may perform differently although the vaccine strains are the same.

* Data supplied by the customer.

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NOTE: The Biogénesis Bagó sera is taken 30 days post vaccination. All other sera is taken 21 days post vaccination.

Notes

1. Vaccine efficacy is influenced by vaccine potency, antigenic match and vaccination regime. Therefore, it is possible that poor antigenic match may be compensated by high potency vaccines and by administering more than one vaccine dose at suitable intervals. Thus, a vaccine with a weak antigenic match to a field isolate, as determined by serology, may nevertheless afford some protection if it is of sufficiently high potency and is administered under a regime to maximise host antibody responses (Brehm, 2008).

2. Vaccine matching data generated in this report only considers antibody responses in cattle after a single vaccination (typically 21 days after vaccination). The long-term performance of FMD vaccines after a second or multiple dose of vaccine should be monitored using post-vaccination serological testing.

Report Authorised By: [redacted]

Date: 22/04/2026 14:41:18

* Data supplied by the customer.