FMD Vaccine Matching Strain Differentiation Report

Lab Reference Batch Number: WRLFMD/2026/000003

Date Received: 30/01/2026

Country of Origin*: Bhutan

Sender*:

[redacted]

Number Tested: 3

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

The results relate only to the samples tested and as received. This report shall not be reproduced except in full.

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: 15568

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FMD Vaccine Matching Strain Differentiation Report - Final

Lab Reference Batch Number: WRLFMD/2026/000003 **Report Date:** 13/07/2026

Report Number: 15568

Date Tests Completed: 09/07/2026 **Country of Origin*:** Bhutan

2dm VNT r_1 RESULTS

	O BHU/12/2019	O BHU/32/2017	O BHU/7/2024
O-3039, Boehringer Ingelheim	0.53, 1.83	0.45, 1.76	0.43, 1.73
O Manisa, Boehringer Ingelheim	0.92, 2.43	0.65, 2.28	0.80, 2.36
O Panasia 2, Boehringer Ingelheim	0.45, 2.18	0.33, 2.05	0.15, 1.71
O/TUR/5/09, MSD Animal Health	1.00, 2.29	0.85, 2.14	1.00, 2.32
O1 Campos, Biogénesis Bagó	0.57, 2.51	0.39, 2.35	0.35, 2.29

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.

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

* Data supplied by the customer.

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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: 13/07/2026 14:47:04

* Data supplied by the customer.