FMD Genotyping Reports

Lab Reference WRL batch Number: WRLMEG/2026/000021

Sender Details: [redacted]

Date Received: 24/04/2026

Country of Origin*: Malaysia

Work has now been completed in respect of the sequences recently submitted and the details are attached.

Please note that all our phylogenetic trees can be accessed via the internet at: http://www.wrlfmd.org/

Results Approved By: [redacted]

Date: 21/08/2026

Official Stamp: [redacted]

[redacted]

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

* Data supplied by the customer

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FAO World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD)

FMDV Genotyping Report

Generated from: FMDtype | FMDV Genotyping Tool
Downloaded on: 19 May 2026
Citation: WRLFMD. 2026. FMDV Genotyping Report [WRLMEG/2026/000021]. (Accessed 19/05/26)

FMDV serotype: A
Country: Malaysia
Year: 2025-2026
Batch: WRLMEG/2026/000021
No. of sequences: 2
Reported date: 19 May 2026

WRLFMD Website: https://www.wrlfmd.org/
Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from

Virus sample: MAY/2527/2025

Sample details

Reception Date:	2026-04-24
Sender reference:	2527/25
Location of origin:	No. 37, Jalan Kemboja 6, Taman Plentong, Tebrau, Johor Bahru, Johor
Country of origin:	Malaysia
Date of collection:	2025-11-26
Host species:	cattle

Genotyping details

Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	633
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
296651	TAI/57/21	Bovine	95.71	0	A	ASIA	Sea-97	None
296652	TAI/56/21	Bovine	95.71	0	A	ASIA	Sea-97	None
296653	TAI/62/21	Bovine	95.71	0	A	ASIA	Sea-97	None
485543	TAI/14/2022	Cattle	95.56	0	A	ASIA	Sea-97	None
296647	TAI/32/21	Bovine	95.24	0	A	ASIA	Sea-97	None
296655	TAI/79/21	Bovine	95.24	0	A	ASIA	Sea-97	None
296642	TAI/6/2021	Cattle	95.08	0	A	ASIA	Sea-97	None
296643	TAI/7/2021	Cattle	95.08	0	A	ASIA	Sea-97	None
296648	TAI/48/21	Bovine	95.08	0	A	ASIA	Sea-97	None
485537	TAI/8/2021	Cattle	95.08	0	A	ASIA	Sea-97	None
FMDV VP1 Prototype Sequences*								
15800	TAI/7/2003	Cattle	90.00	0	A	ASIA	Sea-97	None
15602	TAI/2/97		88.57	0	A	ASIA	Sea-97	None
15476	TAI/118/87		85.85	0	A	ASIA	Thai-87	None
9031	IRQ/24/64_(A22)		82.36	0	A	ASIA	A22	None
7166	IND/40/2000	Cattle	82.27	0	A	ASIA	G-VII	None
13548	SAU/16/95		81.12	0	A	ASIA	G-VII	None
8404	IRN/2/87	Bovine	80.99	0	A	ASIA	Iran-87	None
4935	EGY/1/72	Bovine	79.90	0	A	AFRICA	G-II	None
17478	UKG/119/32_(A12)	Cattle	79.50	0	A	EURO-SA	A12	None
5905	GHA/16/73		79.40	0	A	AFRICA	G-VI	None

* see http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains

Virus sample: MAY/400/2026

Sample details

Reception Date:	2026-04-24
Sender reference:	400/26
Location of origin:	Kampung Parit Sawah, Gerisek, Tangkak, Johor
Country of origin:	Malaysia
Date of collection:	2026-03-27
Host species:	cattle

Genotyping details

Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	None

Sequencing details

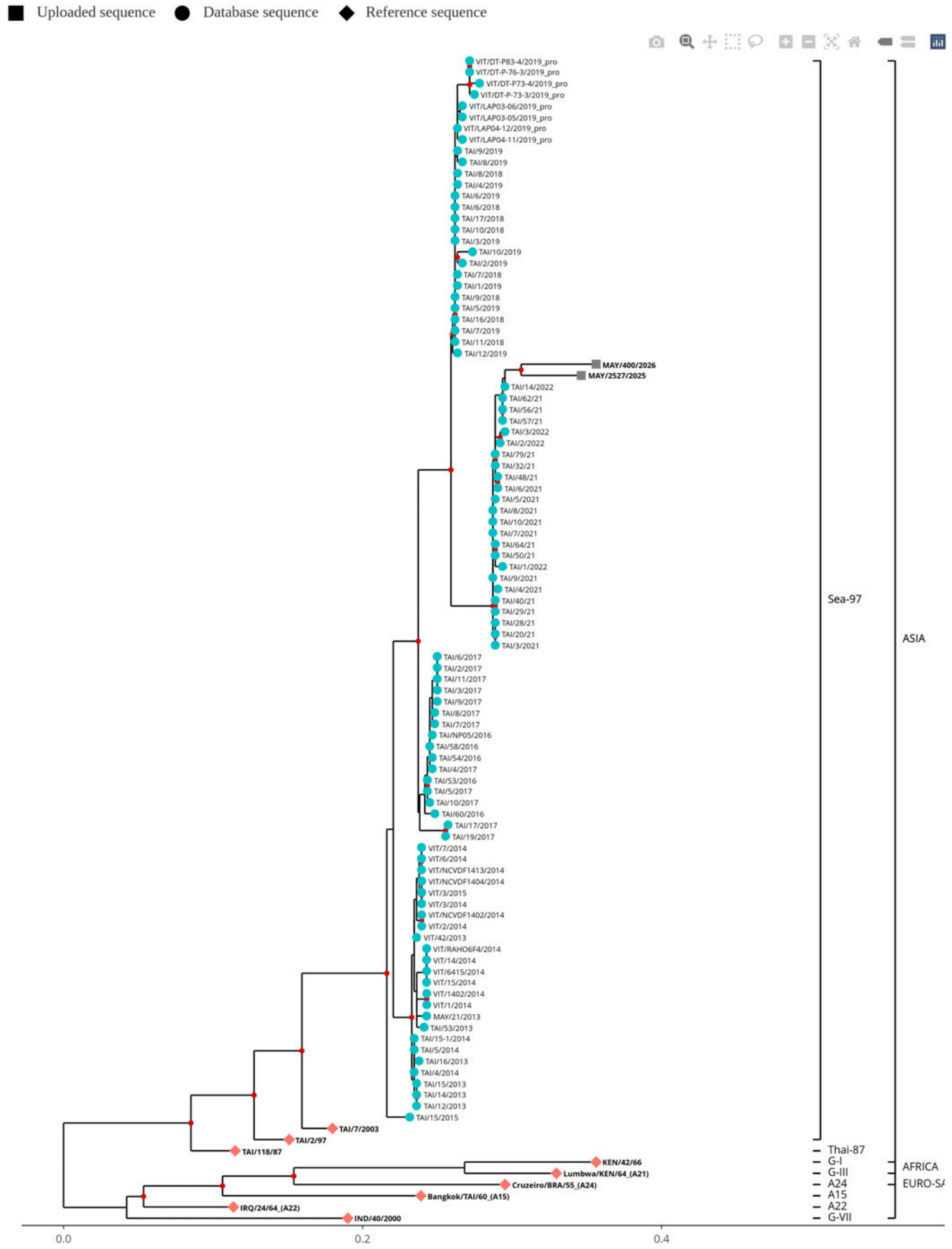
Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	633
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485543	TAI/14/2022	Cattle	94.76	0	A	ASIA	Sea-97	None
296651	TAI/57/21	Bovine	94.60	0	A	ASIA	Sea-97	None
296652	TAI/56/21	Bovine	94.60	0	A	ASIA	Sea-97	None
296653	TAI/62/21	Bovine	94.60	0	A	ASIA	Sea-97	None
296647	TAI/32/21	Bovine	94.13	0	A	ASIA	Sea-97	None
296655	TAI/79/21	Bovine	94.13	0	A	ASIA	Sea-97	None
296642	TAI/6/2021	Cattle	93.97	0	A	ASIA	Sea-97	None
296643	TAI/7/2021	Cattle	93.97	0	A	ASIA	Sea-97	None
296648	TAI/48/21	Bovine	93.97	0	A	ASIA	Sea-97	None
485537	TAI/8/2021	Cattle	93.97	0	A	ASIA	Sea-97	None
FMDV VP1 Prototype Sequences*								
15800	TAI/7/2003	Cattle	89.22	0	A	ASIA	Sea-97	None
15602	TAI/2/97		87.80	0	A	ASIA	Sea-97	None
15476	TAI/118/87		86.01	0	A	ASIA	Thai-87	None
7166	IND/40/2000	Cattle	82.37	0	A	ASIA	G-VII	None
9031	IRQ/24/64_(A22)		81.63	0	A	ASIA	A22	None
8404	IRN/2/87	Bovine	81.47	0	A	ASIA	Iran-87	None
13548	SAU/16/95		80.80	0	A	ASIA	G-VII	None
17478	UKG/119/32_(A12)	Cattle	80.00	0	A	EURO-SA	A12	None
4935	EGY/1/72	Bovine	79.94	0	A	AFRICA	G-II	None
5905	GHA/16/73		79.56	0	A	AFRICA	G-VI	None

* see http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains

Tree


Uploaded sequence
Database sequence
Reference sequence
VIT/DT-P83-4/2019_pro
VIT/DT-P-76-3/2019_pro
VIT/DT-P73-4/2019_pro
VIT/DT-P-73-3/2019_pro
VIT/LAP03-06/2019_pro
VIT/LAP03-05/2019_pro
VIT/LAP04-12/2019_pro
VIT/LAP04-11/2019_pro
TAI/9/2019
TAI/8/2019
TAI/8/2018
TAI/4/2019
TAI/6/2019
TAI/6/2018
TAI/17/2018
TAI/10/2018
TAI/3/2019
TAI/10/2019
TAI/2/2019
TAI/7/2018
TAI/1/2019
TAI/9/2018
TAI/5/2019
TAI/16/2018
TAI/7/2019
TAI/11/2018
TAI/12/2019
MAY/400/2026
MAY/2527/2025
TAI/14/2022
TAI/62/21
TAI/56/21
TAI/57/21
TAI/3/2022
TAI/2/2022
TAI/79/21
TAI/32/21
TAI/48/21
TAI/6/2021
TAI/5/2021
TAI/8/2021
TAI/10/2021
TAI/7/2021
TAI/64/21
TAI/50/21
TAI/1/2022
TAI/9/2021
TAI/4/2021
TAI/40/21
TAI/29/21
TAI/28/21
TAI/20/21
TAI/3/2021
TAI/6/2017
TAI/2/2017
TAI/11/2017
TAI/3/2017
TAI/9/2017
TAI/8/2017
TAI/7/2017
TAI/NP05/2016
TAI/58/2016
TAI/54/2016
TAI/4/2017
TAI/53/2016
TAI/5/2017
TAI/10/2017
TAI/60/2016
TAI/17/2017
TAI/19/2017
VIT/7/2014
VIT/6/2014
VIT/NCVDF1413/2014
VIT/NCVDF1404/2014
VIT/3/2015
VIT/3/2014
VIT/NCVDF1402/2014
VIT/2/2014
VIT/42/2013
VIT/RAHO6F4/2014
VIT/14/2014
VIT/6415/2014
VIT/15/2014
VIT/1402/2014
VIT/1/2014
MAY/21/2013
TAI/53/2013
TAI/15-1/2014
TAI/5/2014
TAI/16/2013
TAI/4/2014
TAI/15/2013
TAI/14/2013
TAI/12/2013
TAI/15/2015
TAI/7/2003
TAI/2/97
TAI/118/87
KEN/42/66
Lumbwa/KEN/64_(A21)
Cruzeiro/BRA/55_(A24)
Bangkok/TAI/60_(A15)
IRQ/24/64_(A22)
IND/40/2000
Sea-97
ASIA
Thai-87
G-I
G-III
A24
A15
A22
G-VII
AFRICA
EURO-SA
0.0
0.2
0.4

Analysis Parameters

Query sequence set: WRLMEG/2026/000021
Number of related sequences reported: 93
Number of prototype sequences in tree: 9
Minimal VP1 subsequence match length: 610
Sequence alignment length: 635

Number of sequences in tree capped at: 100
Sequence alignment method: MAFFT 7.522
Phylogeny reconstruction method: IQ-TREE 2.26
Number of bootstrap samples: 1000
Displaying bootstrap values above: 75

FMDV VP1 Sequences included in the Phylogenetic Tree

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
MAY/21/2013	None	Cattle	WRLFMD	Malaysia	A/ASIA/Sea-97	None
TAI/1/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/10/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/10/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/11/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/11/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/12/2013	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/14/2013	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/15/2013	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/15/2015	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/16/2013	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/16/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/17/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/17/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/19/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/2/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/2/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/3/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/3/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/4/2014	KY322679	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/4/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/4/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/5/2014	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/5/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/5/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/53/2016	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/54/2016	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/58/2016	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/6/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/6/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/6/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/60/2016	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/7/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/7/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/7/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/8/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/8/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/8/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/9/2017	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/9/2018	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
VIT/1/2014	None	Cattle	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/14/2014	None	Cattle	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/15/2014	None	Cattle	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/2/2014	None	Water Buffalo	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/3/2014	None	Cattle	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/3/2015	None	Cattle	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/42/2013	KY322680	Cattle	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/6/2014	None	Pig	WRLFMD	Vietnam	A/ASIA/Sea-97	None
VIT/7/2014	None	Pig	WRLFMD	Vietnam	A/ASIA/Sea-97	None
TAI/9/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/10/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/12/2019	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/3/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/4/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/5/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/6/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/7/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/20/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/28/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/29/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/32/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/48/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None

FMDV VP1 Sequences included in the Phylogenetic Tree *(continued)*

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
TAI/40/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/50/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/57/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/56/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/62/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/64/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/79/21 *	None	Bovine	TRRL	Thailand	A/ASIA/Sea-97	None
TAI/8/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/9/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/10/2021	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/1/2022	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/2/2022	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/3/2022	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/14/2022	None	Cattle	WRLFMD	Thailand	A/ASIA/Sea-97	None
TAI/53/2013 *	LC564911	Cattle	NIAH-JAPAN	Thailand	A/ASIA/Sea-97	32961212
TAI/15-1/2014 *	LC564914	Cattle	NIAH-JAPAN	Thailand	A/ASIA/Sea-97	32961212
VIT/1402/2014 *	OK205894	Water Buffalo	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/6415/2014 *	OK205895	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/NCVDF1402/2014 *	OK205901	Water Buffalo	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/NCVDF1404/2014 *	OK205902	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/NCVDF1413/2014 *	OK205903	Pig	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/RAHO6F4/2014 *	OK206070		PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/DT-P-73-3/2019_pro *	OK318502	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/DT-P73-4/2019_pro *	OK318503	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/DT-P-76-3/2019_pro *	OK318504	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/DT-P83-4/2019_pro *	OK318505	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/LAP03-05/2019_pro *	OK318506	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/LAP03-06/2019_pro *	OK318507	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/LAP04-11/2019_pro *	OK318508	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
VIT/LAP04-12/2019_pro *	OK318509	Cattle	PIADC	Vietnam	A/ASIA/Sea-97	34835007
TAI/NP05/2016 *	OQ745961	Cattle	KASETSART-U	Thailand	A/ASIA/Sea-97	None

* Not a WRLFMD Reference Number;
Not Available