

PROFICIENCY TESTING FOR VETERINARY LABORATORIES

Results tabulation for PT DS19: Discriminatory western blot in small ruminant

Distribution date: 05/11/2019

Lab. ID	Date of receipt	Date of testing	Test method used	Kit Manufacturer	Batch	Expiry date	Method details	Antibodies used	Batch	Expiry date
041	08/11/2019	19/12/2019	DISRIMINATORY TEST	BIORAD	9C0033	15/08/2020		CONTROL TEST	9B0033 9B0033	25/08/2020 25/08/2020
118	06/11/2019	05/12/2019	APHA Bio-Rad TeSeE-based Hybrid Western blotting Method	BioRad	8M0043	27/04/2020		Sha31 and P4	2620317	feb-21
143	06/11/2019	16/12/2019	APHA Prionics-based Hybrid Western blot Method	Prionics	W190101G	13/05/2020		6H4 P4	W190101G Biopharm	13/05/2020
176	06/11/2019	11/11/2019	APHA Prionics-based Hybrid Western blot Method	Thermo Fisher Scientific	W190101G	13/05/2020		6H4 P4	W190101G45 450712	13/05/2020 01/07/2017
182	06/11/2019	19/11/2019	APHA Bio-Rad TeSeE-based Hybrid Western blotting Method	In-house Test with Bio-Rad components	not applicable	31.12.219	Digestion with Bio-Rad TeSeE SAP ELISA components and (5 x concentration of PK).	Sha31 P4	01/01/2019 01/01/2019	31/12/2019 31/12/2019
188	06/11/2019	09/01/2020	Bio-Rad Discriminatory Test (based on the CEA Discriminatory Western blot Method)	Bio Rad	9C0033	15-ago-20	Reagent kit for strain typing of TSE in small ruminants	Ab ctrl Ab test	9C0033 9C0033	15-ago-20 15-ago-20
188*			APHA Bio-Rad TeSeE-based Hybrid Western blotting Method	Bio Rad	9F0044	20/11/2020	APHA Hybrid western blot method	P4 Ab2 (Goat anti-mouse IgG)	R8008 6421780	set-17 15-ago-21
287	06/11/2019	21/11/2019	Bio-Rad Discriminatory Test (based on the CEA Discriminatory Western blot Method)	Bio-Rad	8M0043	27/4/20		Anti-Prp Mab Sheep Anti-Mouse IgG-HRP	8M0043 8M0043	27/4/20 27/4/20
341	06/11/2019	06/01/2020	APHA Bio-Rad TeSeE-based Hybrid Western blotting Method	Bio-Rad	8M0043	27/04/2020	SOP BSE.01	P4	2620317A	31/08/2021
352	06/11/2019	14/12/2019	TeSeE Western Blot Kit	BIO-RAD	8M0043	27/04/2020		SHA31 P4	8M0043 2620317A	27/04/2020 31/08/2021
352*			FLI Discriminatory Western blot Method	R-Biopharm				L42 P4	7750818 2620317A	31/07/2020 31/08/2021
357	06/11/2019		The APHA BioRad TeSeE-based Hybrid Western Blotting Method	TeSeE Western Blot BioRad - CEA	8M0043	27/04/2020	Double immunolabelling with Sha31 from the kit and P4	Ab1 / AbII P4	8M0043 2620317	15 and 19/05/2020 respectively feb-19
366	06/11/2019	22/11/2019	APHA Bio-Rad TeSeE-based Hybrid Western blotting Method	BioRad	8M0043	24/04/2020		P4 Sha31	2620317 8M0043	feb-19 24/04/2020
469	06/11/2019	08/01/2020	APHA Bio-Rad TeSeE-based Hybrid Western blotting Method	BioRad	9F0044	20/11/2020	PESIG/EET-10 Hibrido P4	Ab I Kit TeSeE BioRad (SHA31) P4	9F0044 2620317A	24/11/2020 31/08/2021
469*			APHA Prionics-based Hybrid Western blot Method	Prionics	W190101G	13/05/2020	PESIG/EET-05 Hibrido P4	6H4 P4	W190101G45 2620317A	13/05/2020 31/08/2021
469**			Bio-Rad Discriminatory Test (based on the CEA Discriminatory Western blot Method)	BioRad	9C0033	15/08/202	PESIG/EET-11	Ab Ctrt Ab Test	9B0033 9B0033	25/08/2020 25/08/2020
565	06/11/2019	20/11/2019	FLI Discriminatory Western blot Method	Not applicable	Not applicable	0	PTA-Immunoblot	Mab P4 Mab L42	Not applicable Not applicable	Not applicable Not applicable
601	05/11/2019	21/11/2019	ISS Discriminatory Western blot Method	in-house	/	/	/	SAF84 P4	118 2620317	30jan2020 27-feb-21
933	06/11/2019	12/11/2019	APHA Prionics-based Hybrid Western blot Method	Prionics	W190101G	13 May 2020		6H4 P4	W190101G	13 May 2020
954	07/11/2019	03/12/2019	APHA Prionics-based Hybrid Western blot Method	Thermofisher	W190101G	13/05/2020	SOP 00-14-1637	6H4 P4	W190101G NA	13/05/2020 NA
983	07/11/2019	05/12/2019	ANSES Discriminatory Western blot Method	TeSeE WB for PrPres extraction	9F044	20/11/2020		Bar233 P4	LOT REF 35036A/reconstitution11	21/02/2020 27/02/2020
985	07/11/2019	08/11/2019	APHA Prionics-based Hybrid Western blot Method	Prionics	W190101G	13/05/2020	6H4/P4	6H4 P4	W190101G55	13/05/2020 ago-21
995	11/11/2019	04/12/2019	APHA Biorad Hybrid WB	BioRad	8M0043	27/04/2020	SOP. SE198 Ed7	Sha31 P4 SAF84	Biorad Kit R-Biopharm (C12705) Cayman Chemicals (R4754)	27/04/2020 01/08/2021 29/10/2020

*1st alternative test **2nd alternative test

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Lab. ID	Sample No.	Result Core Antibody	Result Terminal Antibody	Interpretation	Comments	Sample No.	Result Core Antibody	Result Terminal Antibody	Interpretation	Comments	Sample No.	Result Core Antibody	Result Terminal Antibody	Interpretation	Comments
041	DS1901	LOW SIGNAL / HIGH SIGNAL	LOW SIGNAL / HIGH SIGNAL	CLASSICAL SCRAPIE		DS1902	LOW SIGNAL / HIGH SIGNAL	LOW SIGNAL / HIGH VERY LOW SIGNAL	BSE-LIKE		DS1903	LOW SIGNAL / HIGH SIGNAL	LOW SIGNAL / HIGH SIGNAL	CLASSICAL SCRAPIE	
118	DS1901	3 bands	3 bands	Scrapie		DS1902	3 bands	3 bands	Scrapie		DS1903	3 bands	no binding	BSE-in-sheep suspect, requires further testing	
143	DS1901	+++	+++	Classical Scrapie		DS1902	++	++	Ovine BSE		DS1903	++	++	Classical Scrapie	
176	DS1901	positive, medium	positive, strong	TSE, Classical Scrapie		DS1902	positive, weak	negative	BSE like	Ovine BSE	DS1903	positive, medium	positive, strong	TSE, Classical Scrapie	
182	DS1901	pos	pos	Classical scrapie		DS1902	pos	neg	BSE like		DS1903	pos	pos	Classical scrapie	
188	DS1901	low +; high +	low +; high +	classical scrapie	1/9 dilution with negative sample	DS1902	low +; high +	low +; high -	ovine BSE positive	Dot Blot-working dilution : 1/4 low condition and 1/2 high condition	DS1903	low +; high +	low +; high +/-	classical scrapie	1/9 dilution with negative sample
188*	DS1901	medium positive signal	strong positive signal	classical scrapie	1/9 dilution with negative sample	DS1902	strong positive signal	no signal	ovine BSE positive		DS1903	weak positive signal	medium positive signal	classical scrapie	1/9 dilution with negative sample
287	DS1901			Scrapie		DS1902			BSE		DS1903			BSE	
341	DS1901	++++, classical, deglycosylated high	++++	S+ve ovine classical scrapie		DS1902	++++, classical, deglycosylated low	-	S+ve ovine BSE		DS1903	++++, classical, deglycosylated high	++++	S+ve ovine classical scrapie	
352	DS1901	three bands	three bands	Classical scrapie positive		DS1902	three bands	no signal	Ovine BSE positive		DS1903	three bands	three bands	Classical scrapie positive	
352*	DS1901	three bands	three bands	Classical scrapie positive		DS1902	three bands	no signal	Ovine BSE positive		DS1903	three bands	three bands	Classical scrapie positive	
357	DS1901	Positive - Classical Scrapie profile	Positive - Classical Scrapie profile	Classical Scrapie	over 3,500 / 1/10: 1,733	DS1902	Positive - Low molecular mass migration when compared to ovine scrapie	Negative	Ovine BSE	2,845	DS1903	Positive - Classical Scrapie profile	Positive - Classical Scrapie profile (light non-glycosylated band more visible in vivo)	Classical Scrapie	over 3,500 / 1/10: 2,198
366	DS1901	visible signal	visible signal	Classical Scrapie		DS1902	visible signal	no signal	Ovine BSE		DS1903	visible signal	visible signal	Classical Scrapie	
469	DS1901	Positive	Positive	Classical Scrapie		DS1902	Positive	Very Weak Positive	BSE in sheep		DS1903	Positive	Positive	Classical Scrapie	
469*	DS1901	Positive	Positive	Classical Scrapie		DS1902	Positive	Positive	BSE in sheep		DS1903	Positive	Positive	Classical Scrapie	
469**	DS1901	Low PK conc: Positive High PK conc: Positive	Low PK conc: Positive High PK conc: Positive	Classical Scrapie		DS1902	Low PK conc: Positive High PK conc: Positive	Low PK conc: Positive High PK conc: Negative	BSE in sheep		DS1903	Low PK conc: Positive High PK conc: Positive	Low PK conc: Positive High PK conc: Positive	Classical Scrapie	
565	DS1901	positive	positive	Scrapie		DS1902	positive	very weak positive	BSE	ovBse	DS1903	positive	positive	Scrapie	
601	DS1901	positive	positive	classical scrapie		DS1902	positive	negative	BSE-like		DS1903	positive	positive	classical scrapie	
933	DS1901	Strong positive	Strong positive	S+ve Classical scrapie		DS1902	Strong positive, lower band compared to scrapie control	Weak positive	Ovine BSE		DS1903	Strong positive	Strong positive	S+ve Classical scrapie	
954	DS1901	Positive	Positive	Classical Scrapie		DS1902	Positive	Negative	BSE		DS1903	Positive	Positive	Classical Scrapie	
983	DS1901	High molecular weight	Positive	scrapie		DS1902	Low molecular weight	Negative	BSE		DS1903	High molecular weight	Positive	scrapie	
985	DS1901	positive	positive	scrapie		DS1902	positive	negative	BSE in small ruminant or ovine BSE	lower migration with core antibody compared to classical scrapie control and lack of signal with terminal antibody	DS1903	positive	positive	scrapie	
995	DS1901	Positive. Similar profile to classical scrapie control	Positive	Classical scrapie		DS1902	Positive. Lower molecular mass, similar to C-BSE profile	No signal	Classical BSE in ovine		DS1903	Positive. Similar profile to classical scrapie control	Positive	Classical scrapie	

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041	DS1904	LOW SIGNAL / HIGH SIGNAL	LOW SIGNAL / HIGH SIGNAL	CLASSICAL SCRAPIE		DS1905	LOW SIGNAL / HIGH SIGNAL	LOW SIGNAL / HIGH SIGNAL	CLASSICAL SCRAPIE	
118	DS1904	3 bands	3 bands	Scrapie		DS1905	3 bands	3 bands	Scrapie	
143	DS1904	+++	+++	Classical Scrapie		DS1905	+++	++	Classical Scrapie	
176	DS1904	positive, medium	positive, medium, but little stronger with Terminal than with Core antibody	TSE, Classical Scrapie	Different TSE strain?	DS1905	positive, medium	positive, strong	TSE, Classical Scrapie	
182	DS1904	pos	pos	Classical scrapie		DS1905	pos	pos	Classical scrapie	
188	DS1904	low +; high +	low +; high +/-	classical scrapie	1/9 dilution with negative sample	DS1905	low +; high +	low +; high +	classical scrapie	1/9 dilution with negative sample
188*	DS1904	medium positive signal	medium positive signal	classical scrapie	1/9 dilution with negative sample	DS1905	weak positive signal	weak positive signal	classical scrapie	1/9 dilution with negative sample
287	DS1904			BSE		DS1905			Scrapie	
341	DS1904	++++, classical, deglycosylated high	++++	S+ve ovine classical scrapie		DS1905	++++, classical, deglycosylated high	++++	S+ve ovine classical scrapie	
352	DS1904	three bands	three bands	Classical scrapie positive		DS1905	three bands	three bands	Classical scrapie positive	
352*	DS1904	three bands	three bands	Classical scrapie positive		DS1905	three bands	three bands	Classical scrapie positive	
357	DS1904	Positive - Classical Scrapie profile	Positive - Classical Scrapie profile	Classical Scrapie	over 3,500 / 1/10: 2,370	DS1905	Positive - Classical Scrapie profile	Positive - Classical Scrapie profile (light non-glycosylated band more visible in vivo)	Classical Scrapie	over 3,500 / 1/10: 2,048
366	DS1904	visible signal	visible signal	Classical Scrapie	strong signal	DS1905	visible signal	visible signal	Classical Scrapie	
469	DS1904	Positive	Positive	Classical Scrapie		DS1905	Positive	Positive	Classical Scrapie	
469*	DS1904	Positive	Positive	Classical Scrapie		DS1905	Positive	Positive	Classical Scrapie	
469**	DS1904	Low PK conc: Positive High PK conc: Positive	Low PK conc: Positive High PK conc: Positive	Classical Scrapie		DS1905	Low PK conc: Positive High PK conc: Positive	Low PK conc: Positive High PK conc: Positive	Classical Scrapie	
565	DS1904	positive	positive	Scrapie		DS1905	positive	positive	Scrapie	
601	DS1904	positive	positive	classical scrapie		DS1905	positive	positive	classical scrapie	
933	DS1904	Strong positive	Strong positive	S+ve Classical scrapie		DS1905	Strong positive	Strong positive	S+ve Classical scrapie	
954	DS1904	Positive	Positive	Classical Scrapie		DS1905	Positive	Positive	Classical Scrapie	
983	DS1904	High molecular weight	Positive	scrapie		DS1905	High molecular weight	Positive	scrapie	
985	DS1904	positive	positive	scrapie		DS1905	positive	positive	scrapie	
995	DS1904	Positive. Similar profile to classical scrapie control	Positive	Classical scrapie		DS1905	Positive. Similar profile to classical scrapie control	Positive	Classical scrapie	

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Distribution date: 05/11/2019

Comments :

provided by Gabriele Vaccari, Istituto Superiore di Sanità - Rome

Sample DS1901 - Classical scrapie positive tissue homogenate
All labs reported the correct result.

Sample DS1902 - BSE like positive tissue homogenate
All labs except Labs 118 reported the correct result.
Lab 118 reported this sample as scrapie and has therefore failed this PT round.

Sample DS1903 - Classical scrapie positive homogenate
All labs except Labs 118 and 287 reported the correct result.
Lab 118 reported this sample as BSE-in-sheep suspect and has therefore failed this PT round.
Lab 287 reported this sample as BSE and has therefore failed this PT round.

Sample DS1904 - Classical scrapie positive homogenate
All labs except Labs 287 reported the correct result.
Lab 287 reported this sample as BSE and has therefore failed this PT round.

Sample DS1905 - Classical scrapie positive homogenate
All labs reported the correct result.

Conclusion:

In summary laboratories 118 and 287 have failed this PT round, all the other laboratories have passed it.
Laboratories 118 and 287 must stop discriminatory testing until the issues are resolved and a further PT round is successfully repeated.
Labs must inform the EURL of the alternative discriminatory testing arrangements that will be in place for the interim period.

Labs can either:

1. Refer samples for discriminatory testing to the EURL.
2. Refer samples for discriminatory testing to an EU NRL who has passed this exercise.
3. Store samples to discriminatory test at a later date once successful PT is completed.

11 February 2020

Giuseppe Ru, director of TSE EURL