

**Table S1:** Demographic information of all horses assayed in the proof of concept (POC) study.  
QH=Quarter Horse; TB=Thoroughbred, PM=subsequently postmortem-confirmed

<b>ID</b>	<b>Sex</b>	<b>Age</b>	<b>Breed</b>	<b>Disease Status</b>	<b>Weight (kg)</b>
1	Mare	14	QH	eNAD/EDM (PM)	502
2	Mare	14	QH	eNAD/EDM (PM)	520
3	Mare	7	QH	eNAD/EDM	500
4	Gelding	6	QH	eNAD/EDM	440
5	Mare	7	Hanoverian/TB	eNAD/EDM (PM)	545
6	Gelding	13	TB/Hackney	Control	578
7	Mare	13	TB	Control	472
8	Mare	12	QH	Control	517
9	Mare	7	Oldenburg/TB	Control	484
10	Gelding	8	QH	Control	590
11	Mare	4	TB	Control	491

<b>Table S2: Demographic information of all horses assayed in the validation study.</b>					
QH=Quarter Horse; Stbd=Standardbred; TB=Thoroughbred, WB=Warmblood, PM=subsequently postmortem-confirmed, no neuro= histologic assessment of central nervous system not performed at postmortem in control horses					
<b>ID</b>	<b>Sex</b>	<b>Age</b>	<b>Breed</b>	<b>Disease Status</b>	<b>Weight (kg)</b>
1	Mare	15	QH	eNAD/EDM (PM)	504
2	Mare	15	QH	eNAD/EDM (PM)	495
3	Mare	8	QH	eNAD/EDM	503
4	Stallion	1	QH	eNAD/EDM (PM)	320
5	Mare	17	QH	eNAD/EDM (PM)	506
6	Mare	7	QH	eNAD/EDM	544
7	Gelding	17	WB	CVCM (PM)	559
8	Stallion	1	QH/TB	CVCM (PM)	280
9	Stallion	1	QH/TB	CVCM (PM)	373
10	Gelding	3	WB	CVCM (PM)	506
11	Mare	28	Pony	CVCM (PM)	410
12	Mare	4	WB	CVCM	503
13	Mare	8	QH	Control	538
14	Mare	7	TB	Control	530
15	Mare	11	WB	Control	622
16	Mare	8	WB	Control	542
17	Mare	15	TB	Control	616
18	Mare	8	TB/WB	Control	538
19	Gelding	15	TB/Hackney	Control	656
20	Gelding	6	TB	Control	535
21	Mare	9	QH/WB	Control	566
22	Mare	11	QH	Control	558
23	Gelding	16	QH	Control	562
24	Mare	14	QH	Control	576
25	Mare	15	QH	Control	532
26	Mare	14	QH	Control	535
27	Gelding	12	QH	Control	611
28	Mare	27	TB	Control	540
29	Gelding	16	TB	Control	523
30	Mare	26	TB	Control (PM; no neuro)	535
31	Mare	18	TB	Control (PM; no neuro)	594
32	Gelding	8	QH	Control	549
33	Mare	22	TB	Control (PM; no neuro)	542
34	Mare	19	TB	Control	589
35	Mare	5	TB	Control	572
36	Mare	28	QH	Control (PM: no neuro)	436
37	Mare	17	TB	Control (PM; no neuro)	595
38	Gelding	11	Stbd	Control	553
39	Gelding	8	TB	Control	549
40	Gelding	1	QH	Control	310

41	Mare	1	QH	Control	308
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**Table S3:** Demographic information for the horses used in the qRT-PCR and ddPCR assays. Age was calculated based on date of birth and date of necropsy. All horses underwent full neurologic necropsies. Horse 15 (blue) was excluded from the ddPCR assay. QH=Quarter Horse, WB=Warmblood, DWB=Dutch Warmblood, POA=Pony of the Americas, TB=Thoroughbred, CON=Control.

Number	Sex	Age	Breed	Status
1	Mare	14	QH	eNAD/EDM
2	Mare	1.5	QH	eNAD/EDM
3	Mare	2	QH	eNAD/EDM
4	Mare	4	QH	eNAD/EDM
5	Mare	3	QH	eNAD/EDM
6	Stallion	0.5	Morgan	eNAD/EDM
7	Gelding	3	WB	eNAD/EDM
8	Gelding	4	WB	eNAD/EDM
9	Mare	1	DWB	eNAD/EDM
10	Gelding	5	Andalusian	eNAD/EDM
11	Mare	0.6	QH	eNAD/EDM
12	Mare	3	QH	eNAD/EDM
13	Mare	6	QH	CON
14	Gelding	1.5	QH	CON
15	Gelding	2	QH	CON
16	Gelding	13	QH	CON
17	Mare	0.5	Percheron	CON
18	Mare	1	POA	CON
19	Gelding	25	QH	CON
20	Mare	18	Paint	CON
21	Gelding	5	TB	CON
22	Stallion	16	Friesian	CON
23	Mare	3	QH	CON
24	Gelding	4	Arabian	CON

<b>Table S4: Primer sequence for qRT-PCR and ddPCR assays.</b>		
<b>Gene</b>	<b>Primer Sequence</b>	<b>Purpose</b>
<i>ACTβ</i>	F – 5' AAGGAGAAGCTCTGCTATGTCG 3'	qRT-PCR
	R – 5' GGGCAGCTCGTAGCTCTTC 3'	
<i>HPRT1</i>	F – 5' ACCAGTCAACAGGGGACATAA 3'	qRT-PCR
	R – 5' CAACAATCAAGACATTCTTTCCAG 3'	
<i>GAPDH</i>	F – 5' AAGATTGTCAGCAATGCCTCC 3'	qRT-PCR
	R – 5' CCAGGAAATGAGCTTGACAAA 3'	
<i>LOC100062102</i>	F – 5' TCCACCCTAAGTTCGTTGC 3'	qRT-PCR
	R – 5' CATATCCTTAGGTGCGATGG 3'	
<i>LOC100062102</i>	F – 5' GTCCACCCTAAGTTCGTT 3'	ddPCR
	R – 5' GAAGGGCTGAAAGCAAAG 3'	
	Probe – 5' CAGGTATCTCTTCCAGGAGCCTC 3'	