

SPECIFICATIONS: FLUXERGY REACTION MIX

EQUINE HERPESVIRUS 4

Background: Equine herpesvirus 4 (EHV-4) is a common DNA virus in horse populations globally. It is most commonly associated with respiratory infection in young horses in higher density populations and is a biosecurity concern due to outbreaks. It is notable that severe economic strain can be seen in the equine industry from EHV-4 due to lost training time, secondary pneumonia, and sporadic abortion. Further, latent infection and stress-induced shedding is characteristic of the herpes virus subtypes. Current diagnostic testing requires use of PCR for specific diagnosis as clinical signs of EHV-4 mimic that of equine influenza, EHV-1 and other respiratory pathogens.



- ✓ Reduce Central Lab Fees and Logistics
- ✓ Stall-side care
- ✓ Get Fast, Accurate Results that can Improve Decision Making
- ✓ Minimal hands-on time per sample

Reaction Mix Specifications

Test Type	PCR, Direct PCR
Time to Result	~60 minutes
Sample Preparation	~3 min from reagent thaw, No extraction required
Sample Type	NPS in 3mL VTM, See accepted VTM*
Required Sample Volume	42µL
Gene Target	Glycoprotein B
Storage	-10° – -30°C
Format	10 vials, 100 vials, Bulk Plate Reagents
Analyzer Compatibility	Fluxergy Analyzer, High Throughput thermocycler
Cartridge Compatibility	Fluxergy Card, 8 well strip, PCR plate

ASSAY PERFORMANCE

EQUINE HERPESVIRUS 4



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159 banked samples from horses with acute onset of fever and respiratory signs were tested on the Fluxergy platform with reagents specific to Equine Herpesvirus 4. It is a prospective, randomized, blinded laboratory evaluation performed from biological samples collected from 2018 and 2019.

The ongoing independent validation is being conducted at the Equine Infectious Disease Research Laboratory, School of Veterinary Medicine, University of California at Davis.

Table 1. Clinical samples characterized by RT qPCR results.

Sample Group	RT qPCR Results	n
1	Negative EHV-4, negative EHV-1	43
2	Negative EHV-4, positive EHV-1	23
3	Strong positive EHV-4 (Low CT-17-25)	42
4	Moderate positive EHV-4 (Medium CT -26-34)	51

Table 2. Agreement between RT qPCR and Fluxergy PCR.

Fluxergy EHV-4 PCR Assay	RT qPCR EHV-4 Assay		Total
	Positive	Negative	
Positive	90	2	92
Negative	3	64	67
Total	93	66	159
Sensitivity	97% (90/93)	Specificity	97% (64/66)

Table 3. Agreement by sample group.

Sample Group	Fluxergy EHV-4 PCR Assay		Agreement
	Positive	Negative	
1 (Negative)	2	41	95%
2 (EHV-1 positive)	-	23	100%
3 (Strong EHV-4 positive)	42	0	100%
4 (Moderate EHV-4 positive)	48	3	94%

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No Fluxergy products have been cleared or approved by the USDA for veterinary diagnostic use. Fluxergy's current veterinary product offerings are limited to individual laboratory components for use by experienced professional users in developing their own laboratory tests for research or animal use.