



SarcoFluor™, NeoFluor™, and SarcoBlot™ (EPM) sample submission information

What is EPM?

EPM is a debilitating neurologic disease in horses caused by protozoa. In areas where the opossum, the definitive host that fecally sheds infective *Sarcocystis neurona*, and horses coexist, ~50% of horses are seropositive for *S. neurona*. EPM is also caused by *Neospora hughesi*, and, although the source is uncertain, *N. hughesi* has been identified in horses from across the United States.

Diagnostic Testing

EPM diagnostics, based on indirect fluorescent antibody tests (IFATs), have greater sensitivity than the more common, but less sensitive, Western Blot test. The UC Davis VMTH Clinical Diagnostic Labs offer two distinct IFATS that can be performed on both serum and cerebrospinal fluid (CSF).

SarcoFluor™ - detects *Sarcocystis neurona* antibodies

NeoFluor™ - detects *Neospora hughesi* antibodies

Results

SarcoFluor™ and NeoFluor™ results for serum or CSF submissions are provided as a titer with corresponding estimated probabilities of EPM. If serum and CSF are submitted simultaneously, results will also include a serum/CSF ratio. It is recommended to have a concurrent fluid analysis performed on CSF at the time of SarcoFluor™ or NeoFluor™ testing to rule out blood contamination. SarcoBlot™ results are provided as either “positive” or “negative.”

Sample Requirements & Processing

1) SarcoFluor™, NeoFluor™, and SarcoBlot™

- a. *Acceptable specimen:* 2mL serum or CSF
- b. *Whole blood processing for serum:* Spin and separate serum from red cells, placing serum in a new, clean, tube. Serum separator tubes are not recommended; the separator becomes dislodged during shipping, mixing the red cells with the serum.
A handling fee will be assessed for unprocessed or improperly processed blood samples
- c. *CSF processing:* CSF should be collected in a clean red top tube (no anticoagulant). DO NOT spin CSF samples.

2) Fluid analysis

- a. *Acceptable specimen:* 1 mL CSF
- b. *CSF processing:* CSF should be collected in a clean red top tube (no anticoagulant). DO NOT spin CSF samples.

3) Fill out sample submission form completely.

4) If no test selections are made, an IFAT panel (SarcoFluor™ and NeoFluor™) will be run on each specimen.

Shipping Instructions

- 1)** Send all samples on a cold pack / ice pack.
- 2)** Ship overnight by UPS or FedEx (do not use USPS), Monday-Thursday only. Do not ship on Fridays, weekends, national or university holidays.
- 3)** Ship to:
UC Davis VMTH, Central Laboratory Receiving, Room 1033, 1 Garrod Drive, Davis, CA 95616
(530) 752-VMTH (8684), fax (530) 752-5055

Expected turnaround times

- 1)** SarcoFluor™ and NeoFluor™ turnaround time is 3-5 business days from date of sample receipt. SarcoBlot™ (EPM Western Blot) turnaround time is 1 week.
- 2)** CSF fluid analysis turnaround time is one day from date of sample receipt.
- 3)** Samples can be run “STAT,” with a turnaround time of 2 days for SarcoFluor™ and NeoFluor™, 3 days for SarcoBlot™ from date of sample receipt. An additional fee will be assessed with STAT samples.
- 4)** Please do not inquire about results before the expected turnaround time

For more information, please visit our website

http://www.vetmed.ucdavis.edu/vmth/lab_services/clinical_labs



Sample Submission Form

SarcoFluor™, NeoFluor™, and SarcoBlot™ testing (EPM)

SarcoFluor™, NeoFluor™, or SarcoBlot™ sample requirements: Serum in a red top tube and/or a clean cerebrospinal fluid (CSF) tap.

CSF fluid analysis sample requirements: CSF in a red top tube (no anticoagulant).

Sample processing: Spin blood and **separate serum to a new, clean, tube.** Serum separator tubes are not recommended.

DO NOT spin CSF. **A handling fee will be assessed for unprocessed or improperly processed blood samples**

Shipping: Ship on a cold pack for overnight delivery, Monday-Thursday only, to the address below.

UC Davis VMTH, Central Laboratory Receiving, Room 1033, 1 Garrod Drive, Davis, CA 95616

530-752-VMTH (8684), fax 530-752-5055

For more information, visit our website: http://www.vetmed.ucdavis.edu/vmth/lab_services/clinical_labs

Tests Requested

Check the test(s) requested. If no selections are made, an IFAT panel (SarcoFluor™ & NeoFluor™) will be run.

Ratio results are available only if serum **AND** CSF are submitted simultaneously; CSF fluid analysis recommended.

IFAT Panel: SarcoFluor™ & NeoFluor™ SarcoFluor™ **EPM CSF Fluid Analysis:** Additional fee

SarcoBlot™ (Western blot) NeoFluor™ **STAT:** results in 2 days for IFAT, 3 days

samples submitted with this form: serum CSF for Western blot. Additional fee.

Serum collection date	CSF collection date and site
-----------------------	------------------------------

Patient Information

Name	Breed
Sex	Age/DOB
Use	

Owner Information

Name	Address
------	---------

Submitting Veterinarian Information

Clinic name	Clinic Address
Veterinarian name	
Phone	
Fax	Email

Clinical History

(1) Check any or all clinical signs observed

<input type="checkbox"/> Muscle atrophy	<input type="checkbox"/> Lameness	<input type="checkbox"/> Hind limb ataxia (grade ___)
<input type="checkbox"/> Facial paralysis	<input type="checkbox"/> Seizures	<input type="checkbox"/> Fore limb ataxia (grade ___)
<input type="checkbox"/> Head tilt	<input type="checkbox"/> Circling	<input type="checkbox"/> Central blindness
<input type="checkbox"/> Hypermetria	<input type="checkbox"/> Weakness	<input type="checkbox"/> Tongue atrophy
<input type="checkbox"/> Behavior change	<input type="checkbox"/> Other (describe)	

(2) Has horse been treated for EPM? No unknown Yes (duration & date) _____

(3) Vaccinated against EPM? No unknown Yes (date) _____
 rabies? No unknown Yes (date) _____
 West Nile? No unknown Yes (date) _____

(4) Have cervical radiographs or myelogram been done? No Yes (if so, attach report or finding)

(5) Additional information: