

P2Y12 Receptor Platelet Disorder in Greater Swiss Mountain Dogs

A platelet disorder has recently been identified in Greater Swiss Mountain Dogs at the functional and molecular level [1]. The first dog documented to have the disorder bled excessively following a routine spay.

Platelets are small, circulating cytoplasmic fragments that are the first line of defense in stopping the flow of blood from injured blood vessels. An important aspect of platelet function is their ability to stick to each other and plug holes in damaged vessels until blood clotting and tissue repair can occur. The platelets in affected Greater Swiss Mountain dogs are unable to respond properly to a specific platelet activating agent because of a dysfunctional or missing receptor. Therefore, these dogs are at increased risk for spontaneous hemorrhage and they are also at high risk for excessive hemorrhage as a result of injury or surgery. Post operative hemorrhage may be life threatening. The types of spontaneous bleeding that may occur include excessive gingival bleeding during tooth eruption, nose bleeds, and superficial skin bleeds.

By using DNA testing, affected and carrier animals can be identified by submitting a blood sample through the mail. Carrier detection is vital in controlling spread of inherited defects and DNA testing is the only reliable method of detecting these animals.

The sample required for testing for the platelet disorder in Greater Swiss Mountain dogs is a 2 ml EDTA tube (purple top) containing at least 1 ml of whole blood. Care should be taken to not cross contaminate samples during collection, particularly if more than one dog is collected at the same time. Samples should be labeled clearly so that there is no confusion regarding sample identification. Samples should be shipped to the address below. Take care to make sure tubes are protected well to prevent breakage during shipping. The fee for testing is \$100 per sample.

Make checks payable to: Auburn University, Department of Pathobiology.

1. Boudreaux MK, Martin M. P2Y12 receptor gene mutation associated with postoperative hemorrhage in a Greater Swiss Mountain dog. Vet Clin Pathol 40(2):202-6, 2011.

P2Y12 Receptor Test Form

This document should be used when submitting samples for testing.

Please provide the following information on each dog being tested:

Name and Registration Number _____
(if available)

Breed _____

Male or Female (Circle one)

Age at time of sampling or Date of Birth _____

Name and Registration Number of Sire _____

Name and Registration Number of Dam _____

Owner's Name (print clearly) _____

Date _____

Veterinarian/Requester Telephone number _____

Veterinarian/Requester Email address _____

**Name and Address results
should be sent to:
(print clearly)** _____

Send samples to: Mary K. Boudreaux, DVM, PhD
Department of Pathobiology
166 Greene Hall
College of Veterinary Medicine
Auburn University, Alabama 36849-5519
(334) 844-2692

email: boudrmk@auburn.edu

FAX: (334) 844-2652

The fee for testing is \$100 per sample. Sample is EDTA whole blood (1 ml).

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Turnaround time for results is typically 3 to 5 working days.