

Evaluation of Correlation Between BIONOTE Vcheck cTSH and IMMULITE canine TSH

Key words: Bionote Vcheck, Thyroid-stimulating hormone, TSH, Canine hypothyroidism

Introduction

Thyroid-stimulating hormone (TSH) is a pituitary hormone that stimulates the thyroid gland to produce thyroid hormones.

Canine hypothyroidism is a commonly occurring endocrinopathy caused by decreased production of thyroid hormone. Function of thyroid gland is typically assessed by measuring serum thyroid hormone (T4) and TSH concentration. Results of TSH assay is interpreted in conjunction with result of T4 assay. A serum TSH concentration greater than reference range is consistent with hypothyroidism. It is also used to differentiate primary hypothyroidism, secondary hypothyroidism, and euthyroid sick syndrome.

The BioNote Vcheck cTSH is an in vitro immunoassay test kit for the quantitative measurement of canine TSH concentration in serum. Since the kit provides quantitative measurement of TSH concentration, BioNote Vcheck cTSH can be tested to diagnose canine hypothyroidism.

Purpose

The objective of this test was to conduct comparison of TSH concentrations determined by the Vcheck cTSH test with TSH concentrations determined by the IMMULITE® (Siemens Healthcare Diagnostics, Deerfield, IL, USA) used by reference laboratories.

Materials and Methods

Total 52 sera samples were provided from animal hospital and university in Korea.

Tests were performed using Vcheck cTSH and IMMULITE canine TSH according to the manufacturer's instruction.

Results

The test results for the correlation between BioNote Vcheck cTSH and IMMULITE canine TSH were described in figure 1. These samples had various TSH concentrations.

Conclusion

Through this study, it was revealed that the Vcheck cTSH shows good concordance rate with IMMULITE ($R^2=0.9848$)

The test results indicate that Vcheck cTSH has good correlation with IMMULITE that used in reference laboratories. Therefore Vcheck cTSH provides accurate results for diagnosis of canine hypothyroidism in-house.



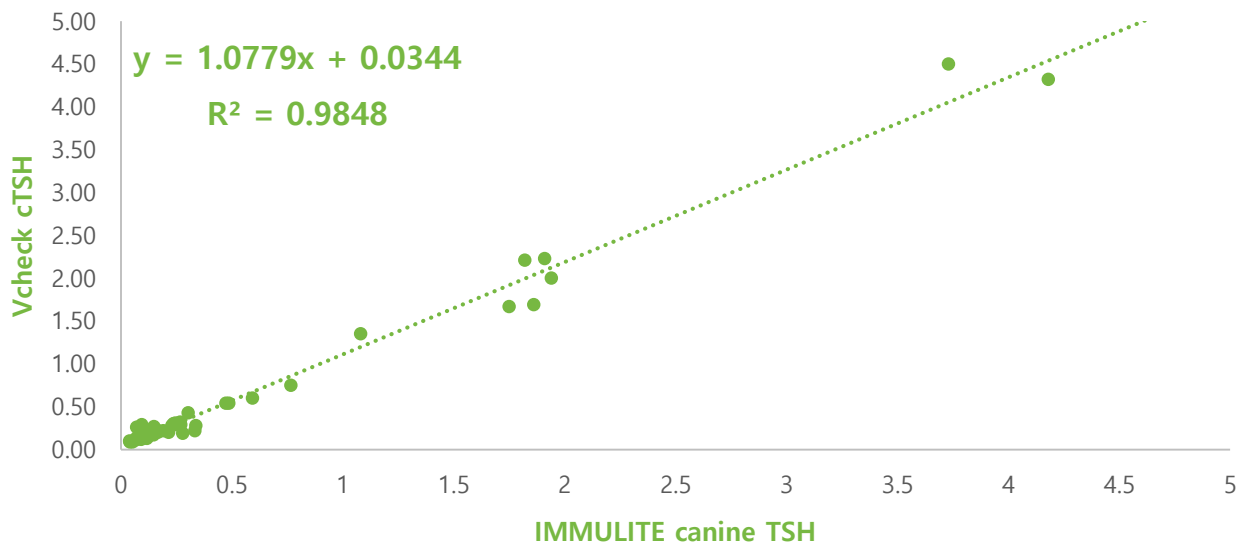


Figure 1. Correlation between Vcheck cTSH and IMMULITE canine TSH (n=52)