



A Review of a Publication about the FUJI PRI-CHEM v-LIP-P Slide

Patient-side Assay of Lipase Activity Correlating with Pancreatic Lipase Immunoreactivity in the Dog (J. Vet. Med. Sci. 73(11): 1481-1483, 2011)

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Ishioka and colleagues of Nippon Veterinary and Life Science University have clinically evaluated the FUJI DRI-CHEM v-LIP-P slide as a diagnostic tool for pancreatitis in dogs.

Pancreatitis is a common exocrine pancreatic disease in dogs, and the pancreatic lipase immunoreactivity (PLI) test is used for its diagnosis.

The FUJI DRI-CHEM v-LIP-P slide has been designed to detect PL specifically using triolein as the reaction substrate and a negatively charged detergent as an auxiliary agent.

In this study, the authors measured lipase activity in 53 canine serum samples using v-LIP-P slides and compared the results with PLI concentrations (Spec™ cPL). Mauck's enzyme method for lipase activity determination was also used for comparison with the v-LIP-P and PLI results.

As shown in fig. 1, v-LIP-P results were better correlated with PLI results ($r = 0.91$) than the results obtained using Mauck's method ($r = 0.63$). Despite the good correlation coefficient, the correlation between v-LIP-P and PLI decreased as the values approached the upper limit of the range. The authors also investigated the clinical utility of the v-LIP-P test by comparison with the diagnostic results of PLI (fig. 2). When the results were classified on the basis of their PLI values, the lipase activity of the normal and pancreatitis groups, determined by the v-LIP-P test, separated completely, although the lipase activity of the boundary group overlapped with both groups. These data suggest that v-LIP-P can distinguish dogs with pancreatitis from healthy dogs in most cases.

Limitations of this study were as follows: (1) hemolytic, icteric, and lipemic samples were excluded and (2) the samples were drawn without collecting information about the subjects' clinical signs and other examination data. Thus, the present results cannot be directly matched with the corresponding pathological states. Nevertheless, because PLI has been reported to be a good pancreatitis marker and because v-LIP-P results showed a good correlation with PLI results the authors believe that it is reasonable to view the v-LIP-P test as a decent pancreatitis test indirectly.

At present, measurement of PL concentration is a standard test for the diagnosis of pancreatitis, but pancreatitis is often an acute severe condition that requires immediate treatment. v-LIP-P is a

new supportive index for provisional diagnosis of pancreatitis in dogs.

Fig. 1 Correlation between the serum PLI and lipase activity in dogs (n = 53). The lipase activity was measured using Fuji DRI-CHEM v-LIP-P (A) and Mauck's enzyme method (B).

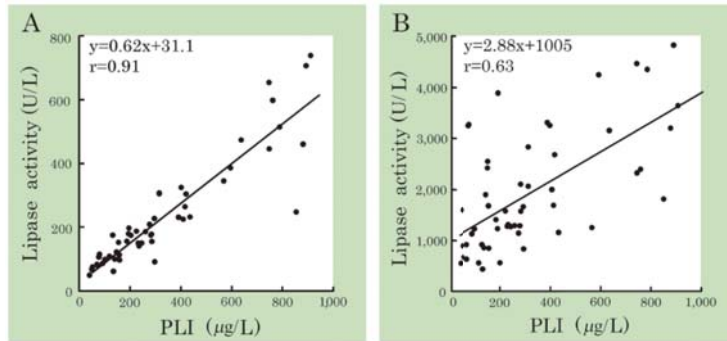
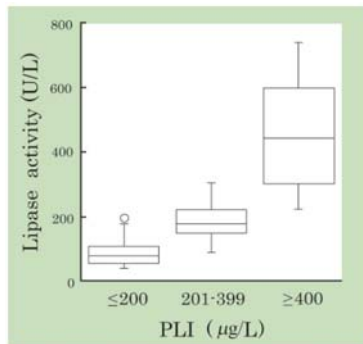


Fig. 2 Distribution of lipase activity measured using v-LIP-P in three different PLI categories. The dogs were sorted according to their PLI values: healthy (≤ 200 $\mu\text{g/L}$, n = 33), boundary (201–399 $\mu\text{g/L}$, n = 15), and pancreatitis (≥ 400 $\mu\text{g/L}$, n = 17). The bars indicate the range between the maximum and minimum values, and the boxes indicate the central 50% of the data.



This article is a review of a publication about FUJI DRI-CHEM v-LIP-P. For details, please refer to the original publication (*J. Vet. Med. Sci.* 73(11): 1481-1483, 2011).

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