

# Evaluation of clinical accuracy of serological and salivary testing for food allergens in asymptomatic dogs

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**Abstract:** Numerous tests purport to measure saliva or serum immunoglobulin levels specific to various foods for evaluation of adverse food reactions (AFR) in companion animals. Despite their widespread use, no validation exists on their utility in diagnosing AFR. The objective of this study was to test dogs without historical or active clinical signs of either dermatologic or gastrointestinal manifestations of AFR with two commonly used commercial serological assays (A and B) and one saliva assay (C). We hypothesized that 1) assays would yield positive results despite lack of clinical disease, and 2) positive results would correlate with prior food exposure. Thorough medical and diet histories were obtained from 30 asymptomatic dogs from the hospital population. The dogs ranged from one to 10 years of age (median = 4 years) and weighed between 2.2 and 50.8kg (median = 20kg). Fourteen foods common to all three assays were evaluated. Results were classified into positive or negative responses to each food. All 30 asymptomatic dogs had at least one positive response to a food. One or more dogs tested positive to 14/14 (100%), 12/14 (86%), and 14/14 (100%) foods in assay A, B, and C, respectively. There was no predictable concordance between positive responses and historical food exposure. The results suggest that serologic and saliva test results do not correspond to clinical evidence of AFR and overdiagnosis of AFR is likely if these tests are used in lieu of a strict elimination diet trial.

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