

## INTISARI

### Analisis Serologis *Ehrlichia canis* pada Sampel Darah Populasi Anjing di Desa Sibetan dan Desa Amlapura Kabupaten Karangasem, Bali

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*Companion vector-borne diseases* (CVBD) dapat menimbulkan ancaman bagi kesejahteraan hewan peliharaan serta risiko bagi manusia karena sifatnya yang zoonotik. *Companion vector-borne diseases* adalah penyakit yang mudah ditularkan melalui vektor seperti caplak dan nyamuk. Ehrlichiosis pada anjing disebabkan oleh *Ehrlichia canis*, bakteri gram negatif obligat intraseluler. Patogen ditularkan selama menghisap darah melalui transmisi transstadial *Rhipicephalus sanguineus*. Di Indonesia, data prevalensi dan epidemiologi pada ehrlichiosis masih terbatas. Diagnosis ehrlichiosis adalah sulit disebabkan oleh gejala klinis yang tidak spesifik sehingga tes alternatif sangat dibutuhkan. Penggunaan *rapid test kit* dalam mendeteksi antibodi pada sampel darah populasi anjing dapat diterapkan sebagai deteksi dini ehrlichiosis pada anjing. Test kit *Ehrlichia canis* Ab Rapid Test berdasarkan pada *indirect lateral flow immunochromatographic assay* dengan sensitivitas 96,7% dan spesifisitas 97,1%. Sebanyak empat puluh sembilan sampel darah diperoleh dari Desa Sibetan dan Desa Amlapura, Kabupaten Karangasem, Bali pada tahun 2021 dan 2022. Sebanyak 7 dari 49 sampel serum dinyatakan positif antibodi *E. canis* yaitu sampel dengan kode EHR 1, EHR 6, EHR 8, EHR 11, EHR 30, EHR 31 dan EHR 37. Hasil dari penelitian ini adalah untuk meningkatkan kewaspadaan dan pemberantasan ehrlichiosis karena penyakit ini berbahaya dan dapat menyebabkan kerugian ekonomi dengan tambahan risiko zoonosis.

**Kata kunci:** Ehrlichiosis, CVBD, serologis, zoonosis, *rapid test kit*

## ABSTRACT

### **Serological Analysis of *Ehrlichia canis* in Blood Samples of Dog Populations in Desa Sibetan and Desa Amlapura Kabupaten Karangasem, Bali**

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Companion Vector-borne Diseases (CVBD) pose a threat to pets' welfare as well as a risk to humans, due to their zoonotic character. Companion vector-borne diseases are diseases which can be easily transmitted via vectors such as ticks and mosquitoes. Ehrlichiosis in dogs is caused by *Ehrlichia canis*, a Gram-negative intracellular obligate bacterium. The pathogen is transmitted during blood meals via transstadial transmission of *Rhipicephalus sanguineous*. In Indonesia, there are limited data on the prevalence and epidemiology of Ehrlichiosis. Due to non-specific clinical signs, the diagnosis of ehrlichiosis is challenging hence alternative tests are very much needed. The use of rapid test kits in detecting antibodies in blood samples of dog populations can be applied as early detection for ehrlichiosis in canines. The *Ehrlichia canis* Ab Rapid Test test kit is based on indirect lateral flow immunochromatographic assay with the sensitivity of 96,7% and specificity of 97,1%. 49 blood samples were obtained from Desa Sibetan and Desa Amlapura, Kabupaten Karangasem, Bali in 2021 and 2022. It was identified that 7 out of 49 serum samples were tested positive for *E. canis* antibodies which are samples with code EHR 1, EHR 6, EHR 8, EHR 11, EHR 30, EHR 31 and EHR 37. The result of this research is to raise awareness and eradicate ehrlichiosis owing to the fact that the disease is dangerous and may cause economic losses with the additional risk of being zoonotic.

**Keywords:** Ehrlichiosis, CVBD, serological analysis, zoonosis, rapid test kit