

## Evaluasi SD Bioline Dengue Duo untuk deteksi infeksi virus dengue serotipe IV dan campur di Jakarta = Evaluation of SD Bioline dengue duo for detection of DNV 4 and mixed serotype infection in Jakarta

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### Abstrak

[Angka kejadian infeksi dengue tinggi di Indonesia, dan Jakarta untuk lebih spesifiknya. Virus dengue terdiri dari 4 serotipe, yang serotipe 1 (DENV-1), 2 (DENV-2), 3 (DENV-3), dan 4 (DENV-4). Sampai saat ini, penanganan infeksi dengue masih mengandalkan diagnosis dini. Meskipun reverse transcription polymerase chain reaction (RT-PCR) masih sebagai baku emas, metode ini cenderung mahal dan sulit untuk dilakukan. Inilah alasan untuk pengembangan berbagai tes cepat, termasuk diantaranya SD Bioline Dengue Duo. Dengan demikian, evaluasi SD BIOLINE Dengue Duo akan bermanfaat dalam dunia klinis. Peneliti menggunakan sampel serum yang diambil dari masyarakat, menguji sampel tersebut menggunakan SD BIOLINE Dengue Duo, dan membandingkannya dengan baku emas [reverse transcription polymerase chain reaction (RT-PCR) dan isolasi virus pada lini sel C6/36]. Ditemukan bahwa sensitivitas, spesifisitas, NPV, dan PPV SD BIOLINE Dengue Duo untuk mendeteksi demam berdarah serotype campur dan tidak diketahui adalah 100%. Dalam infeksi DENV-4, SD BIOLINE Dengue Duo menunjukkan sensitivitas 60% dan spesifisitas 100%. Dengue infection incidence remained high in Indonesia, and Jakarta to be more specific. Dengue virus consists of 4 serotypes, which are dengue serotype 1 (DENV-1), 2 (DENV-2), 3 (DENV-3), and 4 (DENV-4). Until now, management of dengue infection still relies on early diagnosis. Although Reverse transcription polymerase chain reaction (RT-PCR) remains as a gold standard diagnostic method, this method is costly and difficult to set up. These issues are the reasons for the development of various rapid tests, including SD Bioline Dengue Duo. Evaluation of SD BIOLINE Dengue Duo would therefore be beneficial in the clinical setting. Researchers used serum sample taken from the community, tested the samples using SD BIOLINE Dengue Duo, and compare it with the gold standard [Reverse Transcription – Polymerase Chain Reaction (RT-PCR) and virus isolation in cell line C6/36]. It was found that the sensitivity, specificity, NPV, and PPV of SD BIOLINE Dengue Duo for detection of dengue of mixed and unknown serotype were 100%. In infection of DENV-4, SD BIOLINE Dengue Duo showed a sensitivity of 60% and specificity of 100%.]