

Development of a Single-Chain Variable Fragment of CR3022 for a Plasmonic-Based Biosensor Targeting the SARS-CoV-2 Spike Protein

Taufik Ramdani Tohari ¹, Isa Anshori ^{2,3,*}, Umi Baroroh ^{1,4}, Antonius Eko Nugroho ², Gilang Gumilar ^{3,5,6}, Shinta Kusumawardani ¹, Sari Syahrani ¹, Brian Yulianto ^{3,5}, Wyanda Arnafia ⁷, Irvan Faizal ^{8,9}, Yeni Wahyuni Hartati ^{1,10}, Toto Subroto ^{1,10} and Muhammad Yusuf ^{1,10,*}

¹ Research Center for Molecular Biotechnology and Bioinformatics, Universitas Padjadjaran, Bandung 40133, Indonesia

² Lab-on-Chip Group, Biomedical Engineering Department, Institute of Technology, Bandung 40132, Indonesia

³ Research Center for Nanoscience and Nanotechnology (RCNN), Institut Teknologi Bandung, Bandung 40132, Indonesia

⁴ Department of Biotechnology, Indonesian School of Pharmacy, Bandung 40266, Indonesia

⁵ Advanced Functional Material Research Group, Faculty of Industrial Technology, Institut Teknologi Bandung, Bandung 40132, Indonesia

⁶ Research and Development Division, PT. Biostark Analitika Inovasi, Bandung 40375, Indonesia

⁷ Research and Development Division, PT. Tekad Mandiri Citra, Bandung 40292, Indonesia

⁸ Centre for Vaccine and Drug Research, National Research and Innovation Agency Republic of Indonesia, Kawasan Puspiptek Serpong, Tangerang Selatan 15314, Indonesia

⁹ Department of Biotechnology, Faculty of Biotechnology, Atma Jaya Catholic University of Indonesia, BSD Campus, Tangerang 15345, Indonesia

¹⁰ Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Jatinangor 45363, Indonesia

* Correspondence: isaa@staff.stei.itb.ac.id (I.A.); m.yusuf@unpad.ac.id (M.Y.)

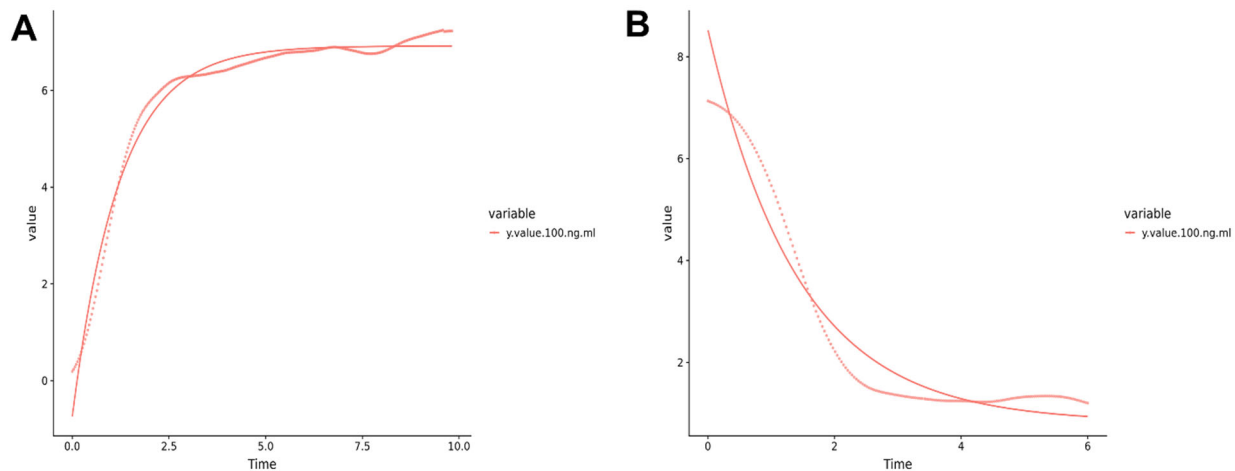


Figure S1. Kinetic analysis of association (A) and dissociation (B) curves of IgY-SARS-CoV-RBD 100 ng/ml by software anabel version 2.2.3

Table S1. Obtained parameters of IgY kinetic analysis using single curve analysis method in Anabel 2.2.3

Spot	c(Reagent) [M]	k_{obs}	k_{diss} [1/ min.]	k_{ass} [1/ min. M]	KD [M]
y.value.100.ng/ml	2.78E-09	0.822231	0.703297	42816122	1.64E-08

k_{obs} : Observation rate, k_{diss} : dissociation rate, k_{ass} : association rate, and KD: dissociation constant