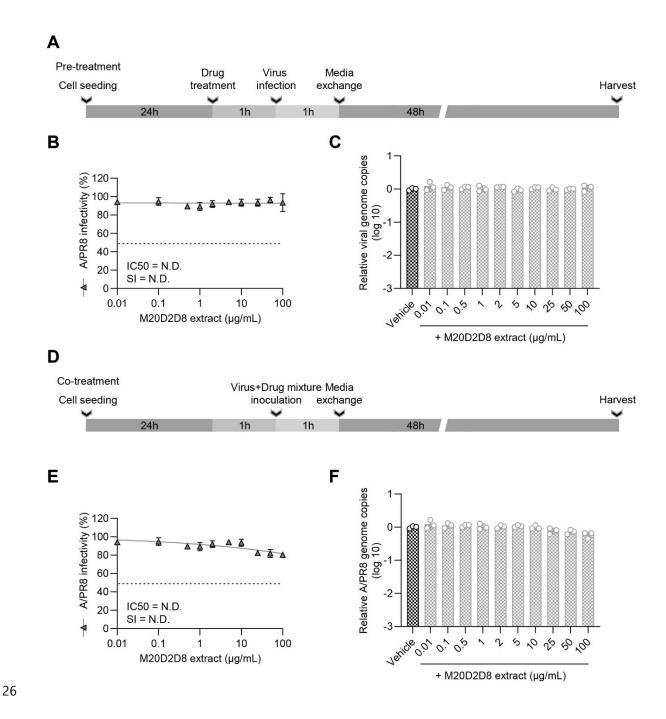
2 **Supplementary Materials for** 3 Identification and characterization of a marine bacterium extract from Mameliella sp. 4 M20D2D8 with antiviral effects against influenza A and B viruses 5 6 Hyo-Jin Kim^{1*}, Jun-Gyu Park^{2*}, Kyeong-Seo Moon³, Su-Bin Jung³, Yong Min Kwon⁴, Nam Seon Kang⁴, Jeong-7 Hyeon Kim⁵, Sang-Jip Nam⁵, Grace Choi^{4†}, Yeong-Bin Baek^{1†}, Sang-Ik Park^{3†} 8 9 ¹ Laboratory of Veterinary Pathology, College of Veterinary Medicine, Chonnam National University, Gwangju 10 61186, Republic of Korea 11 ² Laboratory of Veterinary Zoonotic Diseases, College of Veterinary Medicine, Chonnam National University, 12 Gwangju 61186, Republic of Korea 13 ³Laboratory of Veterinary Pathology, College of Veterinary Medicine, Chonnam National University, Gwangju 14 61186, Republic of Korea; College of Veterinary Medicine and BK21 FOUR Program, Chonnam National 15 University, Gwangju, 61186, South Korea. 16 ⁴ National Marine Biodiversity Institute of Korea, 75, Jangsan-ro 101beon-gil, Seocheon-gun, Chungcheongnam-17 do, 33662, Republic of Korea 18 ⁵Department of Chemistry and Nanoscience, Ewha Womans University, Seoul 03760, Republic of Korea 19 20 †Correspondence to: gchoi@mabik.re.kr (G. Choi); ybbaek@jnu.ac.kr (Y.-B. Baek); sipark@jnu.ac.kr (S.-I. Park) 21 22 This PDF file includes: 23 Figures S1 to S2

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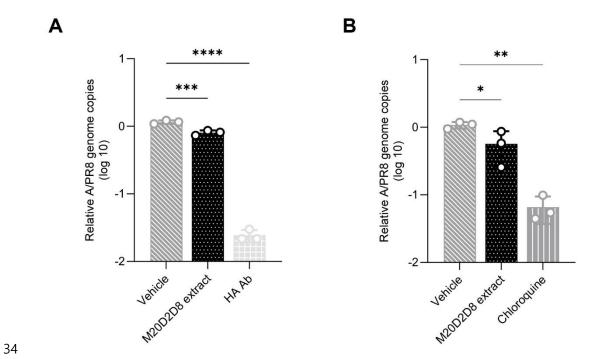
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Supplementary Fig. S1 Antiviral effect of M20D2D8 extract by pre-treatment (**A-C**) and co-treatment (**D-F**) against A/PR8 strain. (**A**) Schematic diagram of virus inoculation and extract treatment. (**B**) IC₅₀ and SI of M20D2D8 extract measured by CPE-inhibition assay. (**C**) Viral genome copies detected by RT-qPCR. (**D**) Schematic diagram of virus inoculation and extract treatment. (**E**) IC₅₀ and SI of M20D2D8 extract measured by CPE-inhibition assay. (**F**) Viral genome copies detected by RT-qPCR. All data in the graphs are presented as arithmetic means \pm S.D. from 3 independent experiments.



Supplementary Fig. S2 Virus attachment (**A**) and penetration assays (**B**). (**A**) Viral genome copies by pretreatment of the extract before virus binding. (**B**) Viral genome copies by post-treatment after virus binding. All data in the graphs are presented as arithmetic means \pm S.D. from 3 independent experiments. HA, haemagglutinin; IAV NP, nucleoprotein. *, P < 0.05; **, P < 0.01; ***, P < 0.001, ****, P < 0.0001.