Results of Studies Evaluating the Impact of SARS-CoV-2 Variants of Concern on COVID-19 Vaccines: An Ongoing Systematic Review

Neutralization Plots

Updated January 19, 2022

PREPARED BY:

Henning Jacobsen, PhD (Department of Viral Immunology, Helmholtz Centre for Infection Research) and Ioannis Sitaras, PhD, MRes (Department of Molecular Microbiology and Immunology, Johns Hopkins Bloomberg School of Public Health)

And by:

Melissa Higdon, Maria Deloria Knoll, Naor Bar Zeev, and Marley Jurgenmeyer at the *International Vaccine Access Center, Johns Hopkins Bloomberg School of Public Health*

Minal Patel and Daniel Feikin at the World Health Organization

For comments or questions, please contact: Melissa Higdon at mhigdon@jhu.edu.





Contents

Methods for Inclusion in Neutralization Plots	3
Primary Series Vaccines	4
,	
Booster Doses	6

Methods for Inclusion in Neutralization Plots

The studies included in the plots below were identified as part of an ongoing systematic review of studies evaluating the impact of SARS-CoV-2 variants of concern on COVID-19 vaccine performance. Studies from March 15, 2021 onward that report fold reductions in neutralization or that report data that enable the calculation of fold reductions in neutralization are included.

The following studies are not included:

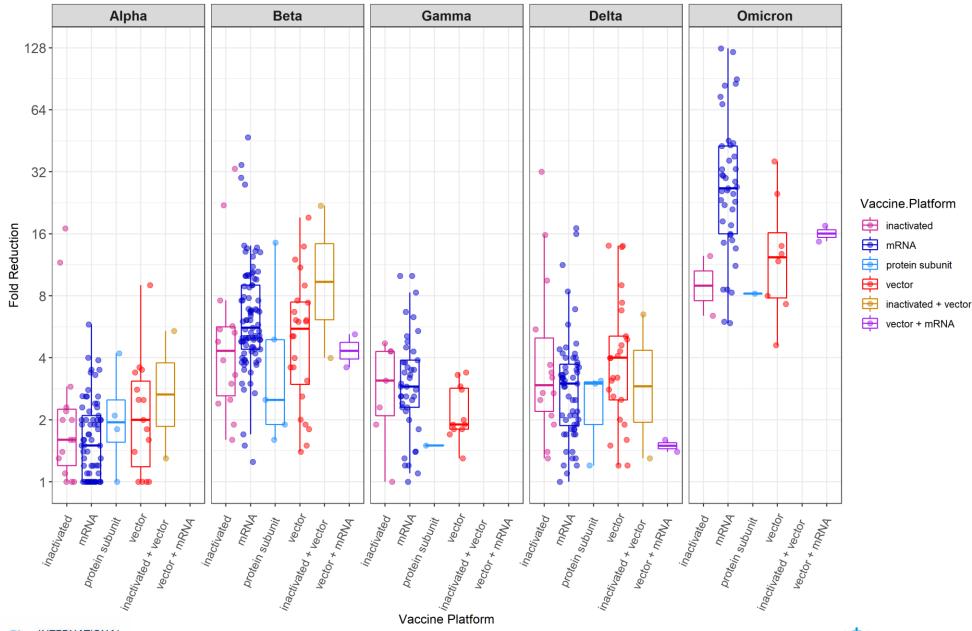
- Studies evaluating partial vaccination
- Studies that collected vaccinee sera < 7 days or > 6 months post final vaccine dose
- Studies that used a variant of concern (e.g. Alpha, Delta) as the reference strain

The WHO COVID-19 Weekly Epidemiological Update is posted weekly on the WHO website (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports). A summary of results from these studies by vaccine and by variant of concern are provided in the WEU every other week.

For any questions, comments, or suggestions about this document, please contact Melissa Higdon: mhigdon@jhu.edu.

Primary Series Vaccines

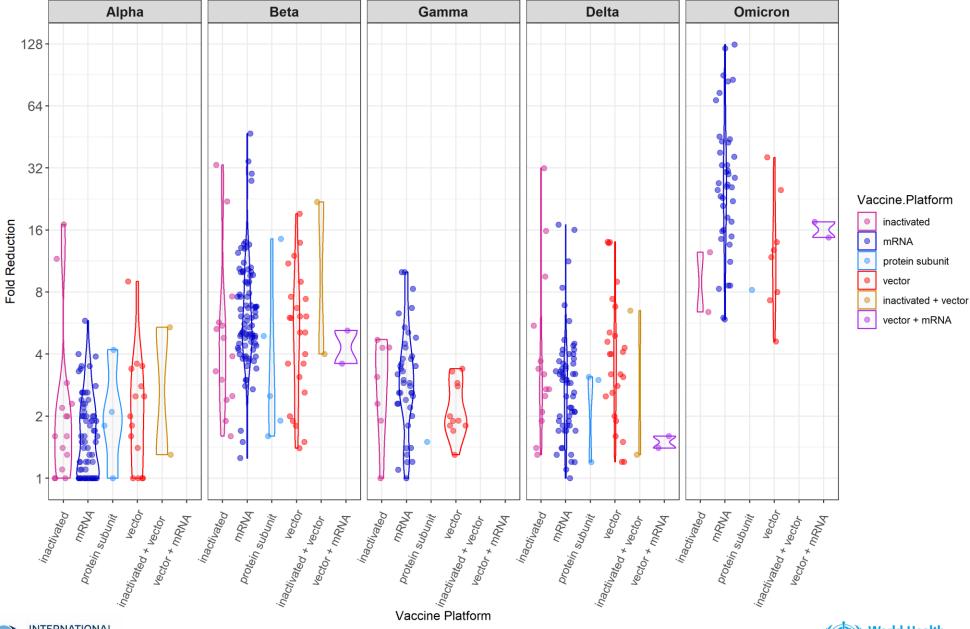
Fold Reduction in NAbs by SARS-CoV-2 Variant of Concern and Vaccine Platform, Box Plot







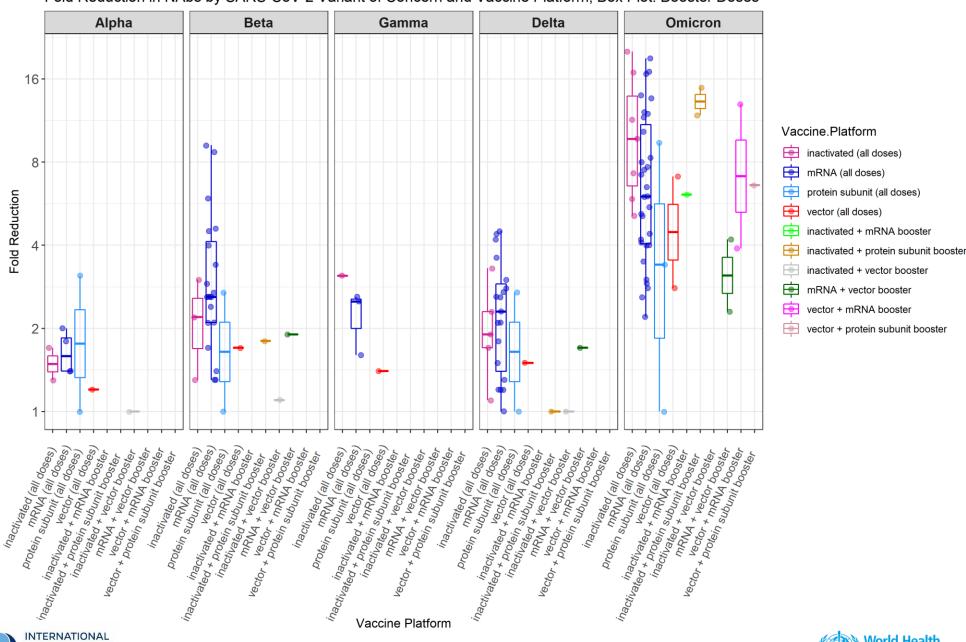
Fold Reduction in NAbs by SARS-CoV-2 Variant of Concern and Vaccine Platform, Violin Plot



Booster Doses

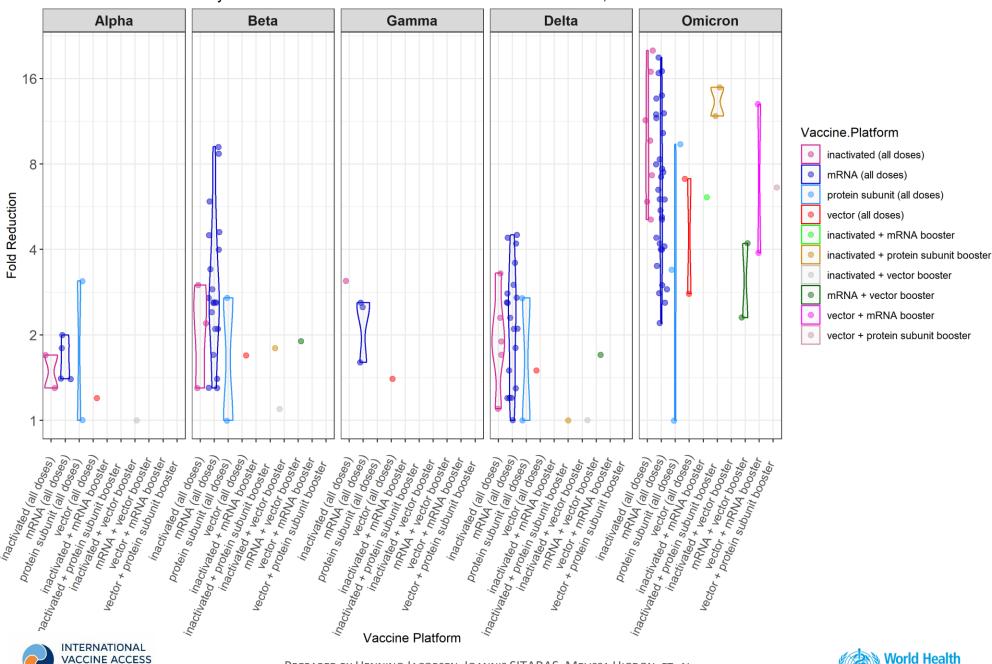
VACCINE ACCESS

Fold Reduction in NAbs by SARS-CoV-2 Variant of Concern and Vaccine Platform, Box Plot: Booster Doses





Fold Reduction in NAbs by SARS-CoV-2 Variant of Concern and Vaccine Platform, Violin Plot: Booster Doses





CENTER