How to Read This Supplemental Report

The SARS-CoV-2 variant therapeutic data in this report have been curated in collaboration with the National Institutes of Health (NIH) Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV) Preclinical Working Group with support from the Foundation for the National Institutes of Health (FNIH). New and updated information will be added on a weekly basis as more studies are shared. Please continue to check back as our curated database grows. Please contact us at NCATSOpenDataPortal@nih.gov with any feedback, comments, or questions to help us improve this resource.

What Data is Included?

The underlying data in these visualizations has been curated, in collaboration with ACTIV, from a prioritized set of publications (both preprints and peer-reviewed articles). To improve data accuracy, publications are limited to prominent therapeutic agents (both approved and in clinical trial), with an emphasis on studies conducted 1) by the sponsoring pharmaceutical company or 2) with a government partner. **The OpenData Portal does not intend to serve as a comprehensive dashboard for all variant therapeutic data published in the literature.**

How to Interpret the Visualizations

The visualization graphics are meant to provide a quick-glance summary of how **individual SARS-CoV-2 variants** may respond to known therapeutics, compared to reference strains. The displayed fold-change values represent data collected from published *in vitro* viral neutralization assays comparing variants to a reference strain.

Of important note, the data displayed were generated:

- From different assay types and conditions
- By different research laboratories
- Using different reference strains
- With test material from different sources/of potentially different grades, tested at different dose ranges

As a result, the visualizations **should not be used to conduct side-by-side comparisons** of therapeutics. Reported minimum fold reduction values (e.g. >1000-fold) may have greater actual fold change values than those displayed. Furthermore, the data shown are collected from *in vitro* assays, and it is not known how *in vitro* neutralization assay data correlate with clinical outcomes. It is worth noting that the experimental therapeutic concentrations are not necessarily correlated to clinical concentrations; thus therapeutics with large reported fold reductions in activity **may still be active against the variants in clinical settings**, as standard dosing/exposure in patients could exceed the required therapeutic window. Lastly, the data may be from preliminary reports that **have not been peer reviewed** and thus should not be regarded as conclusive, guide clinical practice or health decisions, or be reported in news media as established information.

Interactive versions of these graphics are available on the OpenData Portal Visualization Page
Additional details on the visualized data are available on the **NCATS OpenData Portal.**

New to the OpenData Portal Variant Database this week:

New Datasets/Publications:

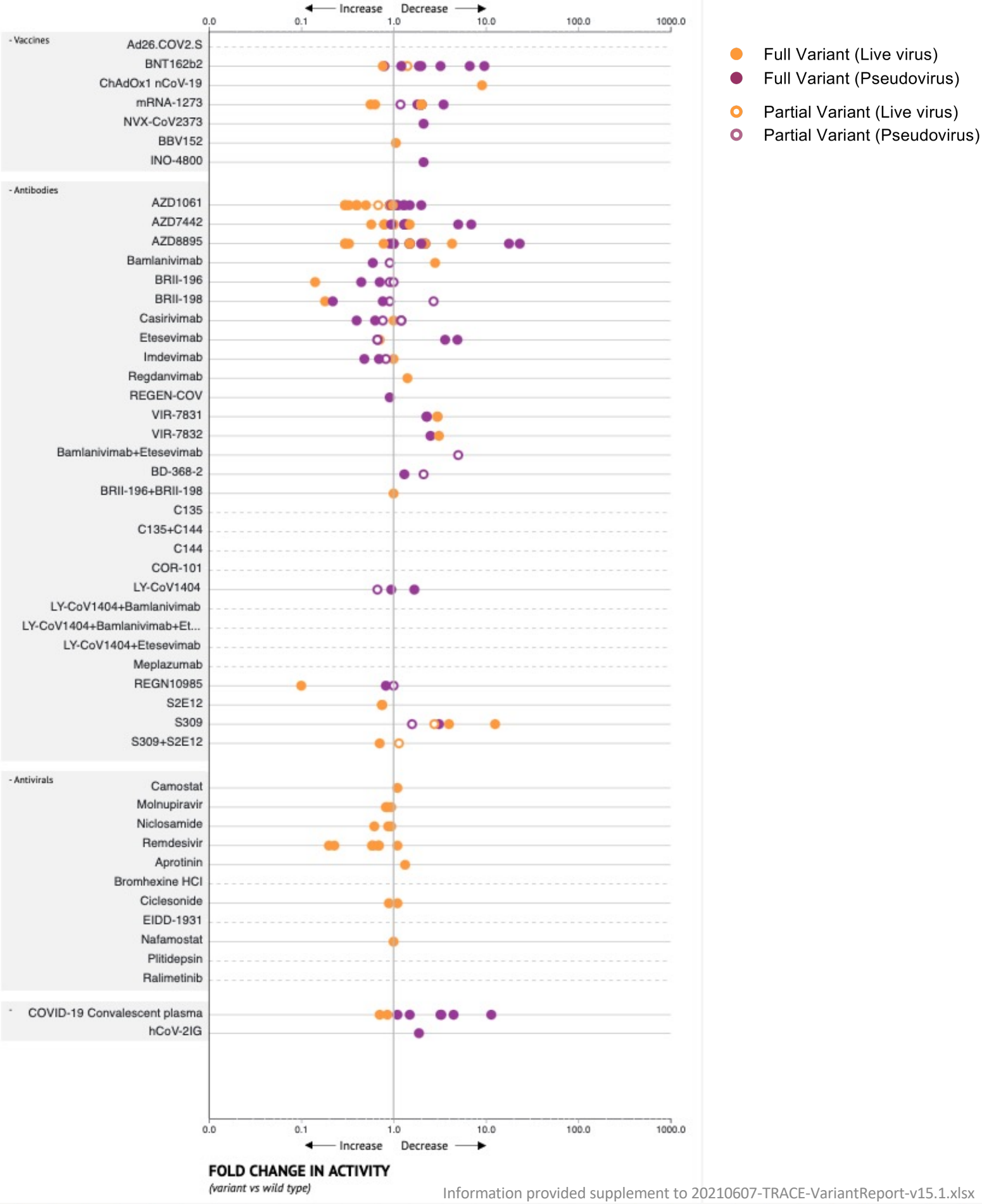
1. Remdesivir antiviral activity against SARS-CoV-2 variants *[Directly Submitted Data]*
2. Sensitivity of SARS-CoV-2 B.1.1.7 to mRNA vaccine-elicited antibodies *[Peer-reviewed paper]*

Updated Datasets/Publications:

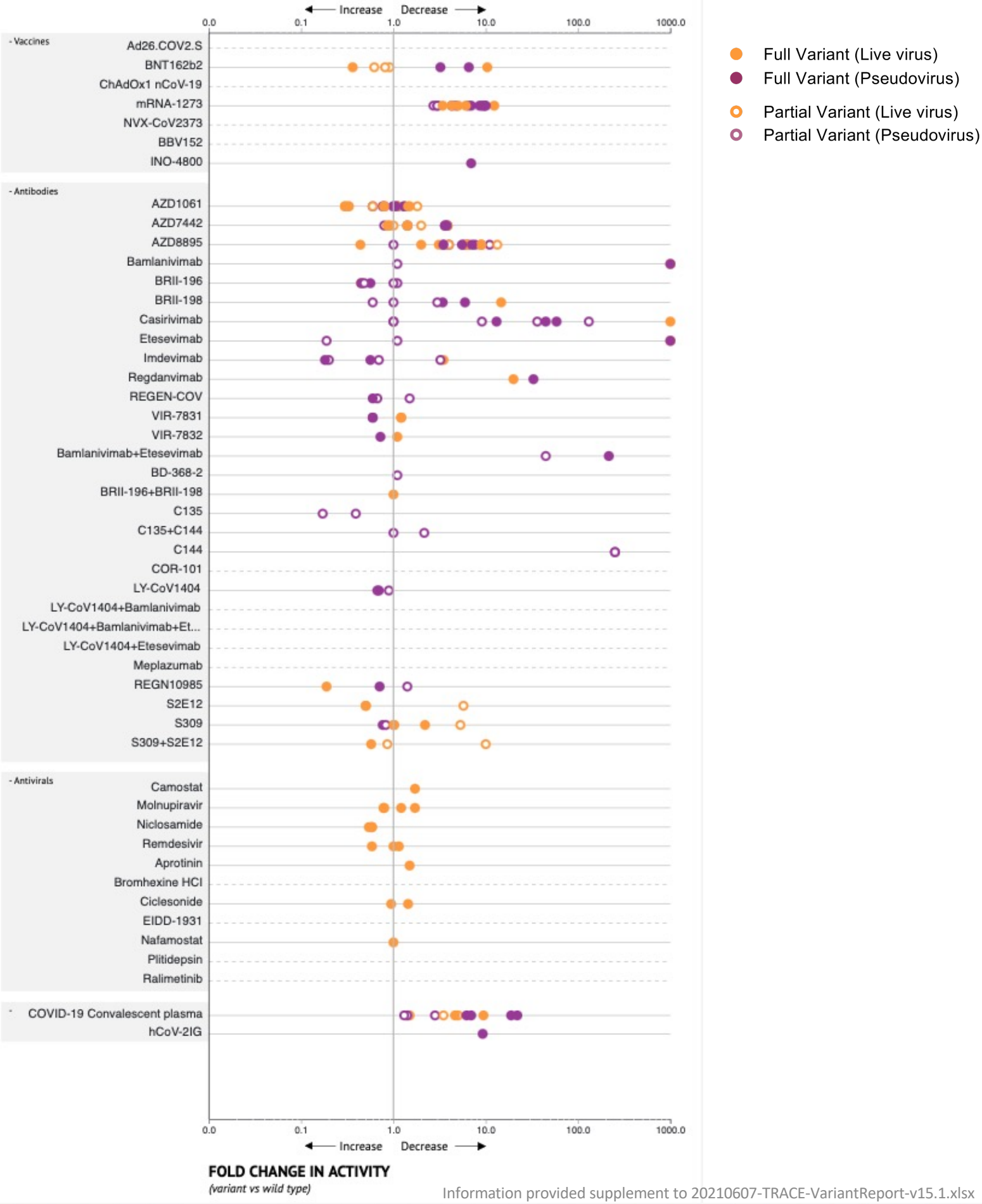
1. Increased resistance of SARS-CoV-2 variant P.1 to antibody neutralization *[Peer-reviewed paper]*
2. FDA Fact Sheet for Health Care Providers Emergency Use Authorization (EUA) of Bamlanivimab and Etesevimab *[FDA Fact Sheet]*

Data provided by
Gilead Sciences

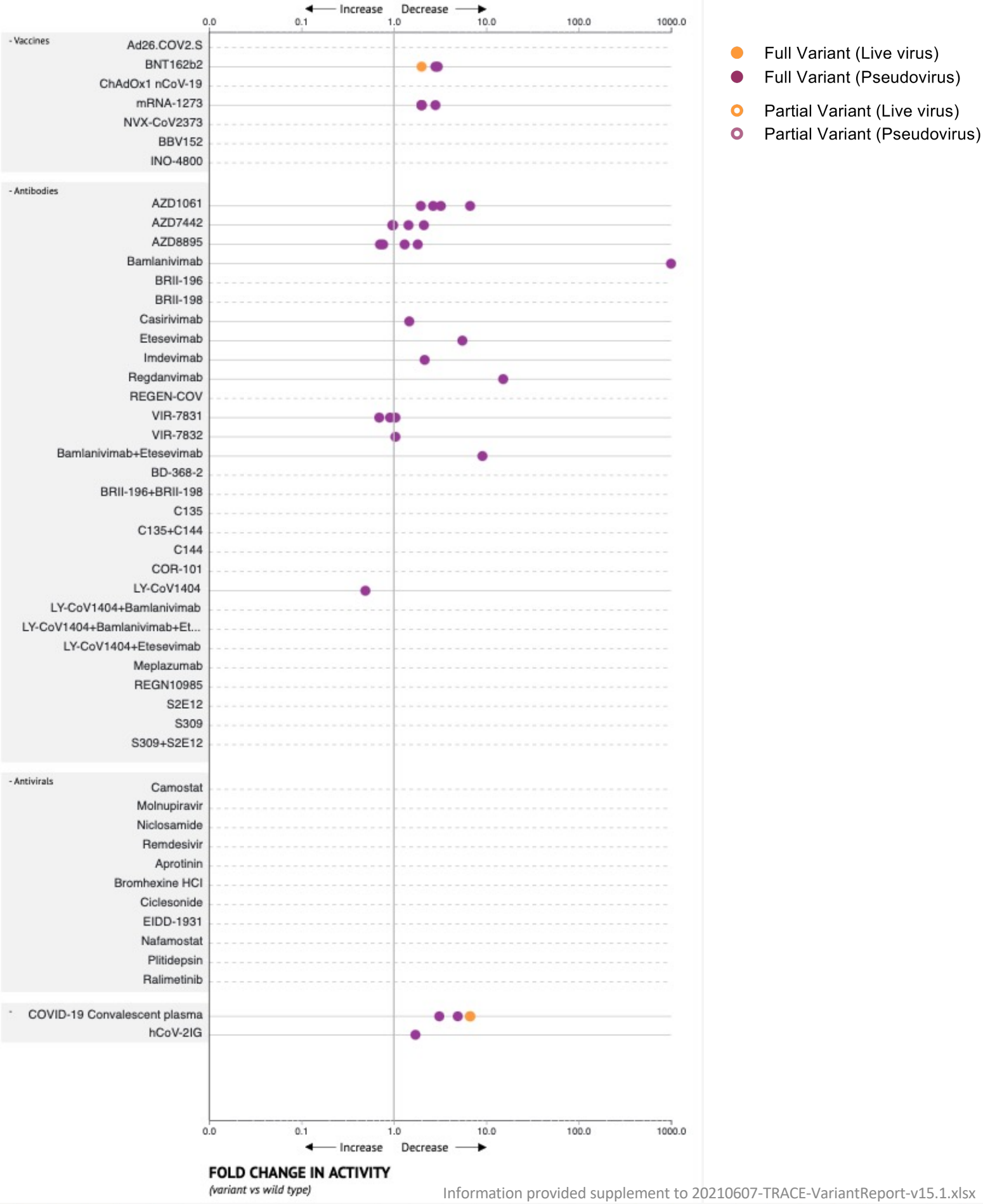
B.1.1.7 | Reported *in vitro* Therapeutic Activity



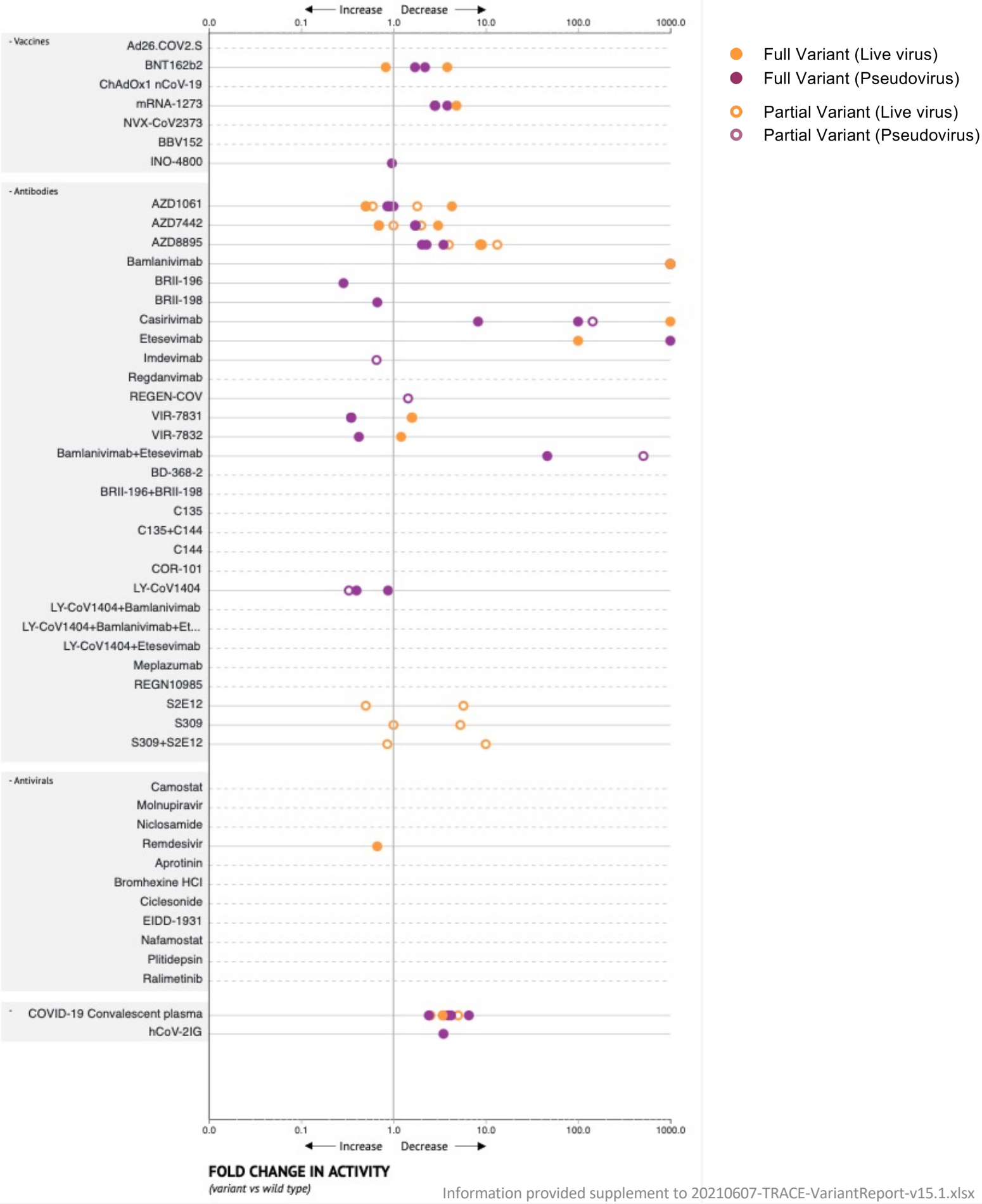
B.1.351 | Reported *in vitro* Therapeutic Activity



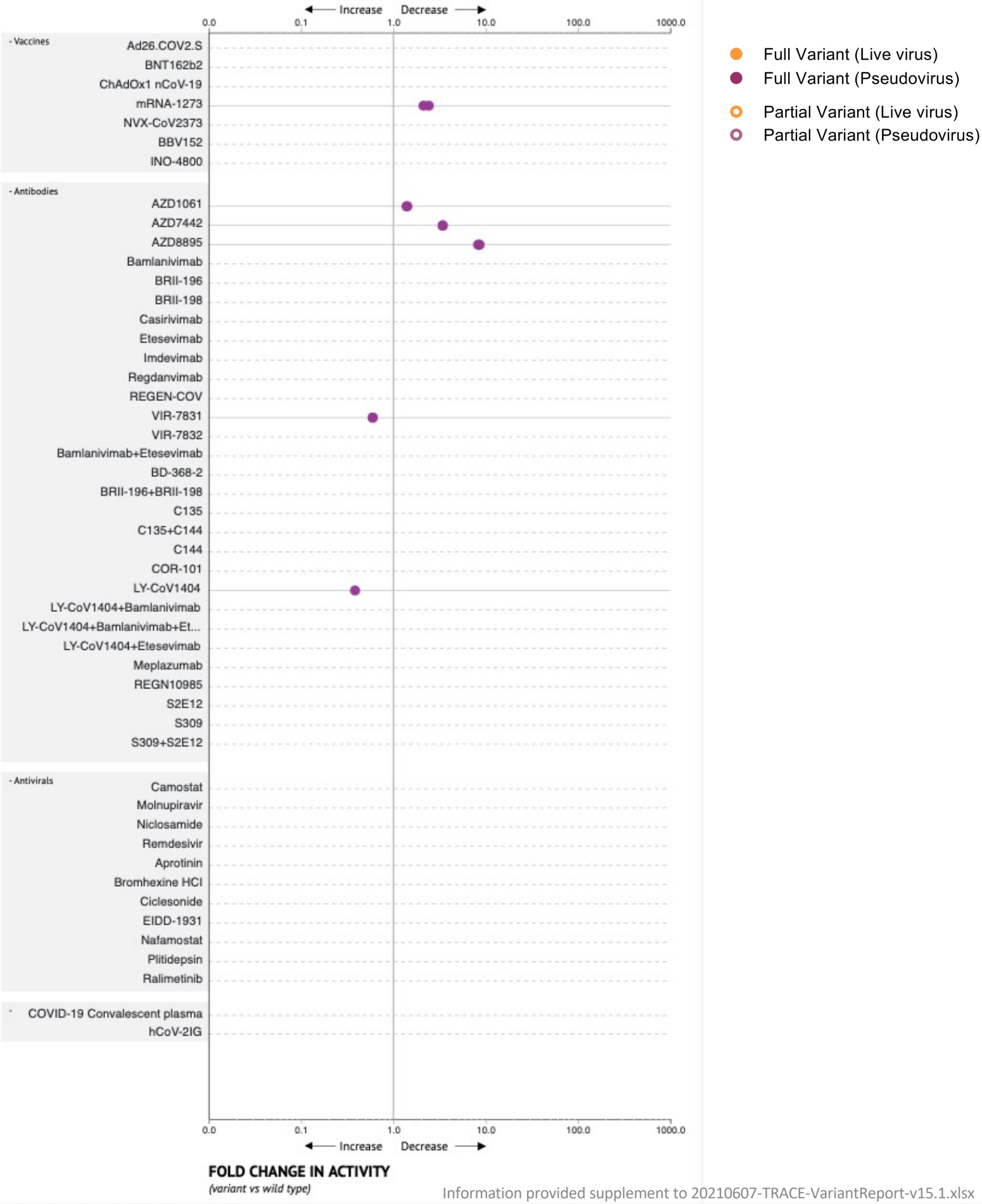
B.1.427/429 | Reported *in vitro* Therapeutic Activity



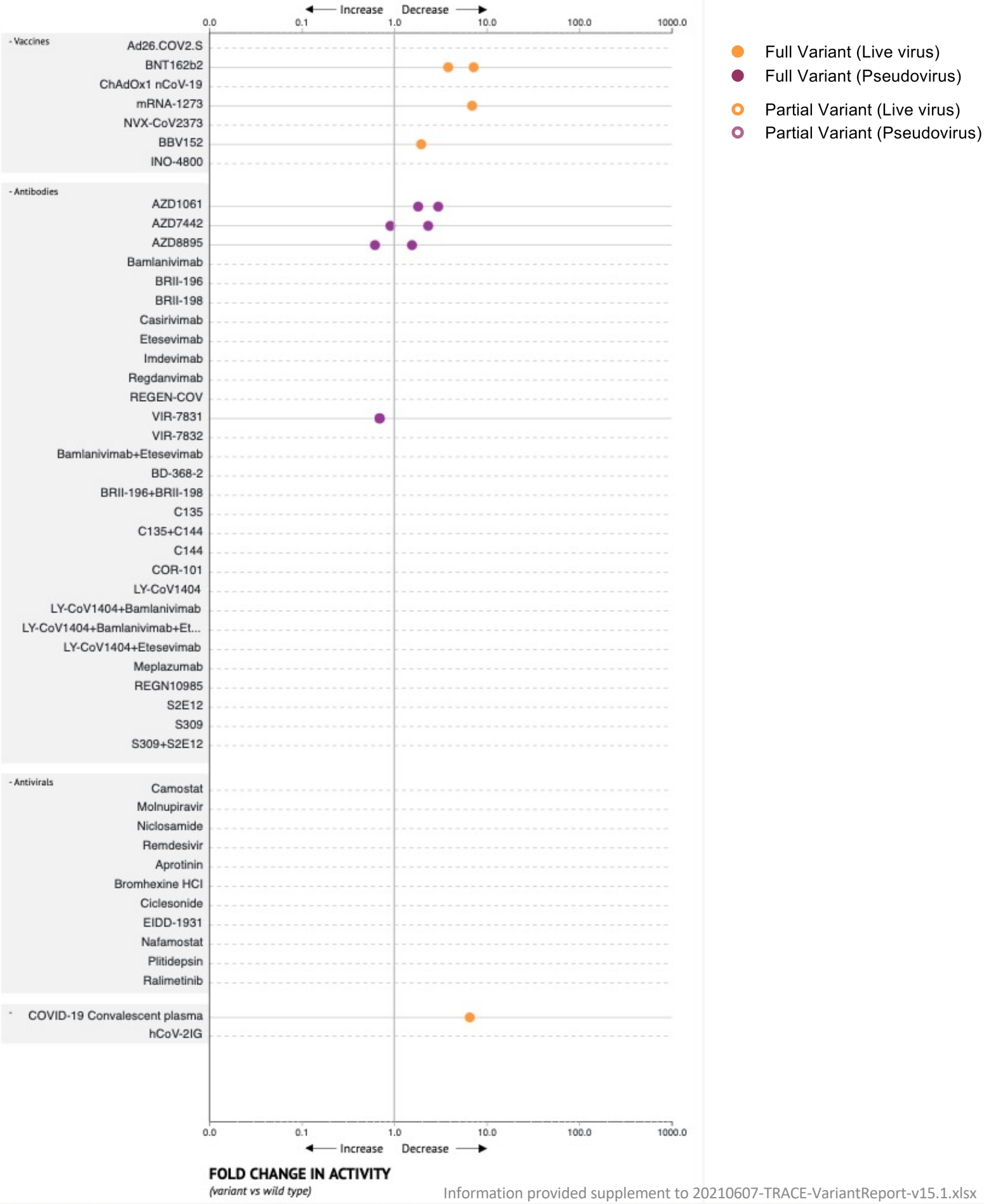
P.1 | Reported *in vitro* Therapeutic Activity



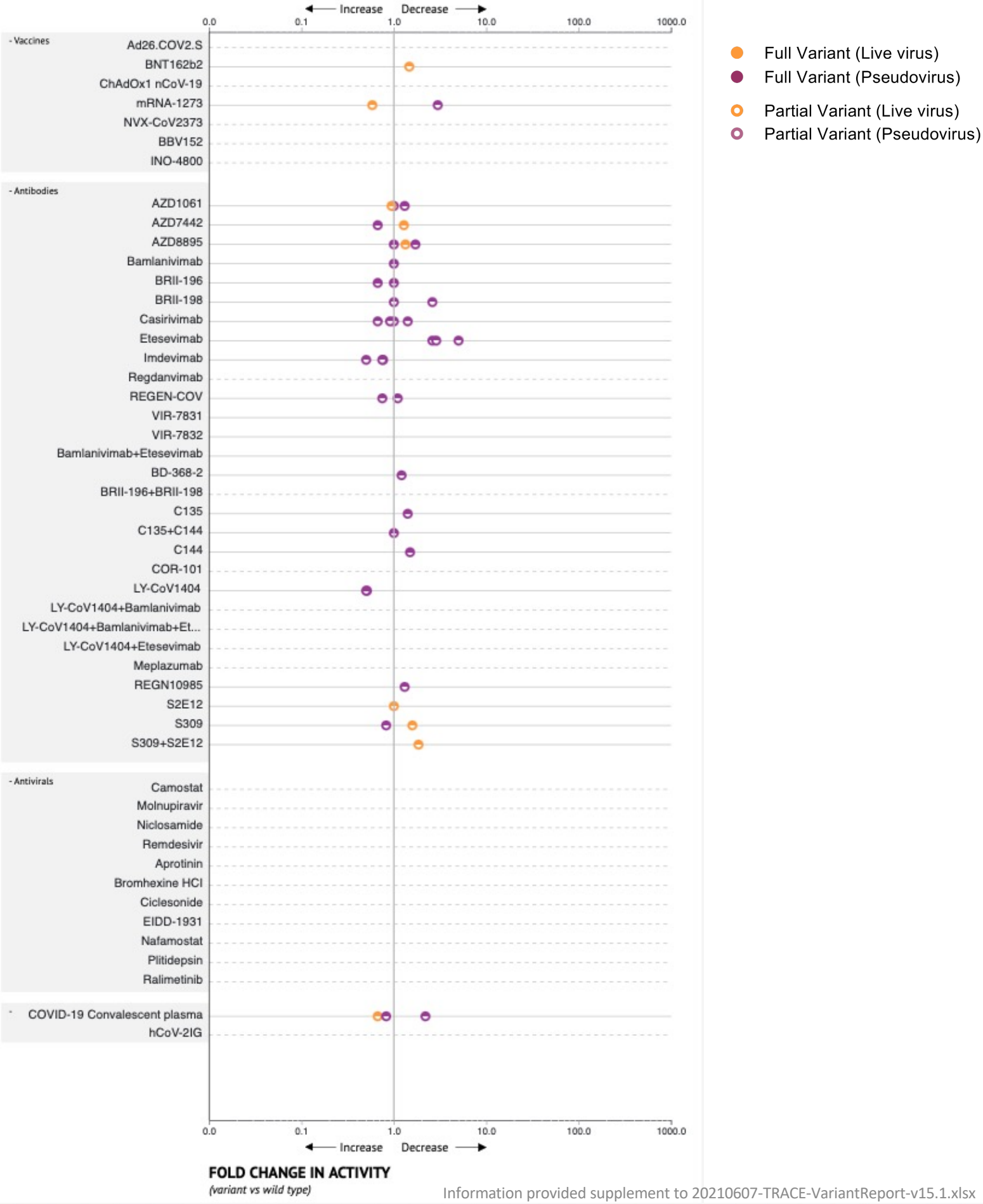
B.1.526 | Reported *in vitro* Therapeutic Activity



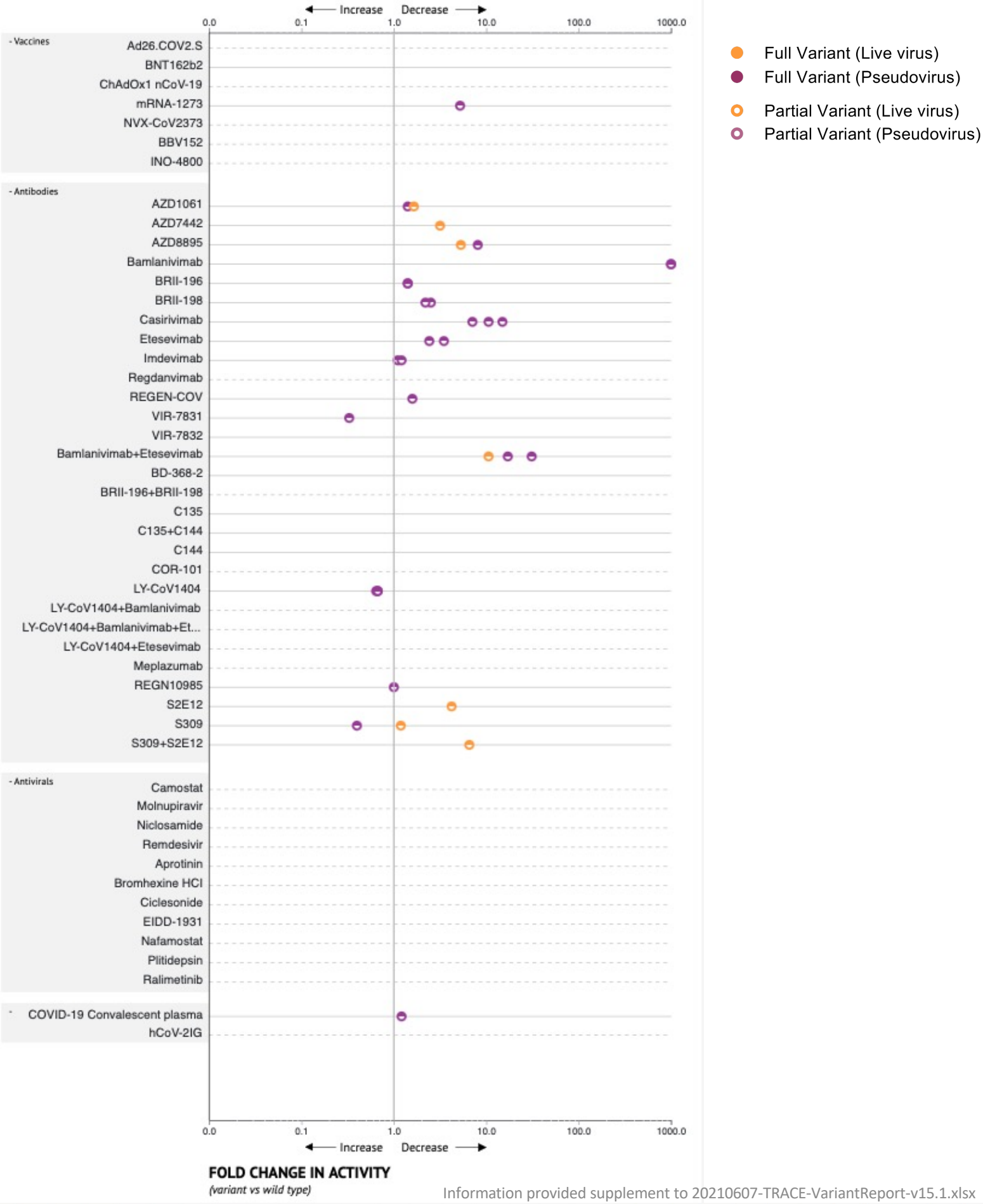
B.1.617 | Reported *in vitro* Therapeutic Activity



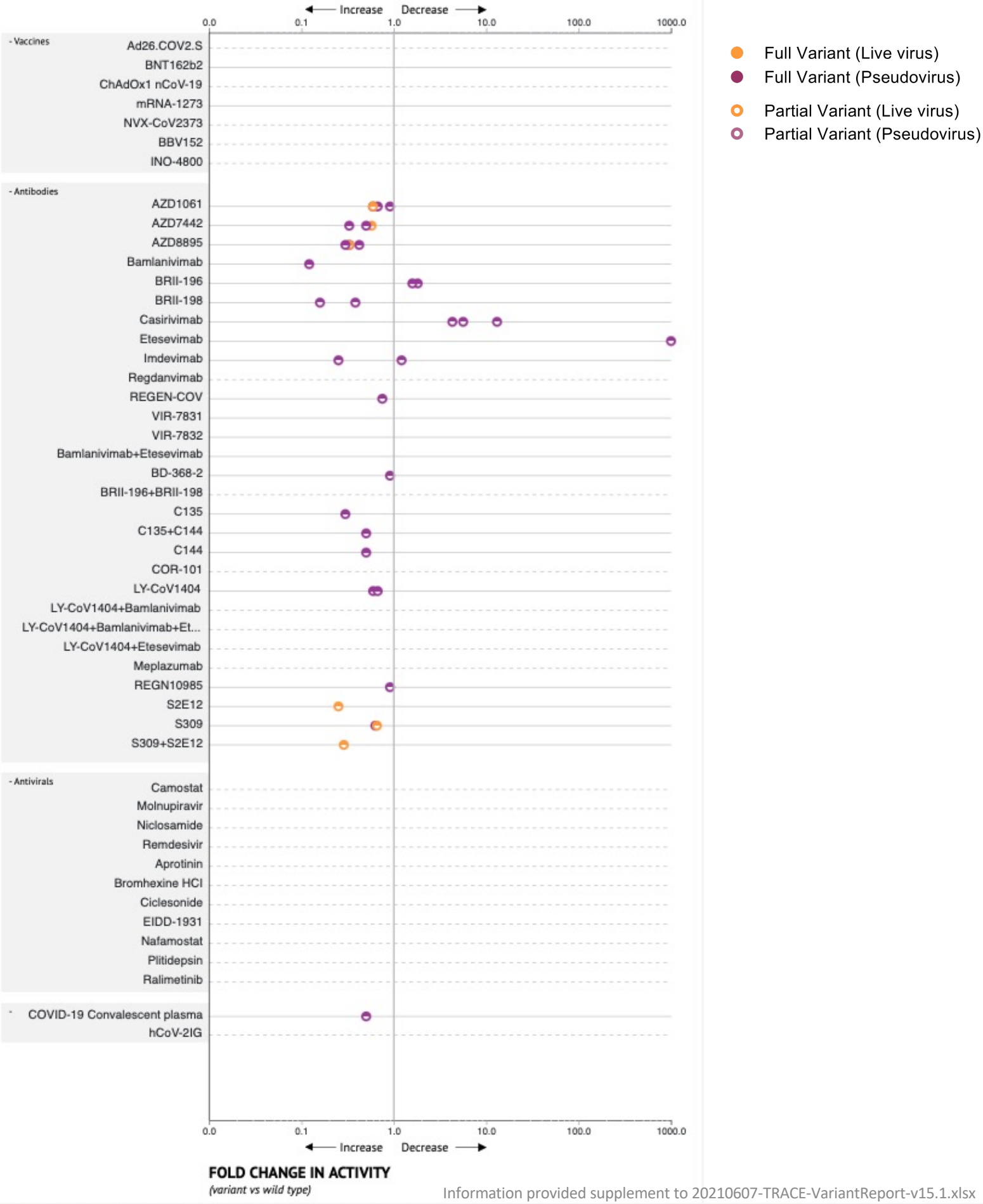
N501Y Single Mutation Variant | Reported *in vitro* Therapeutic Activity



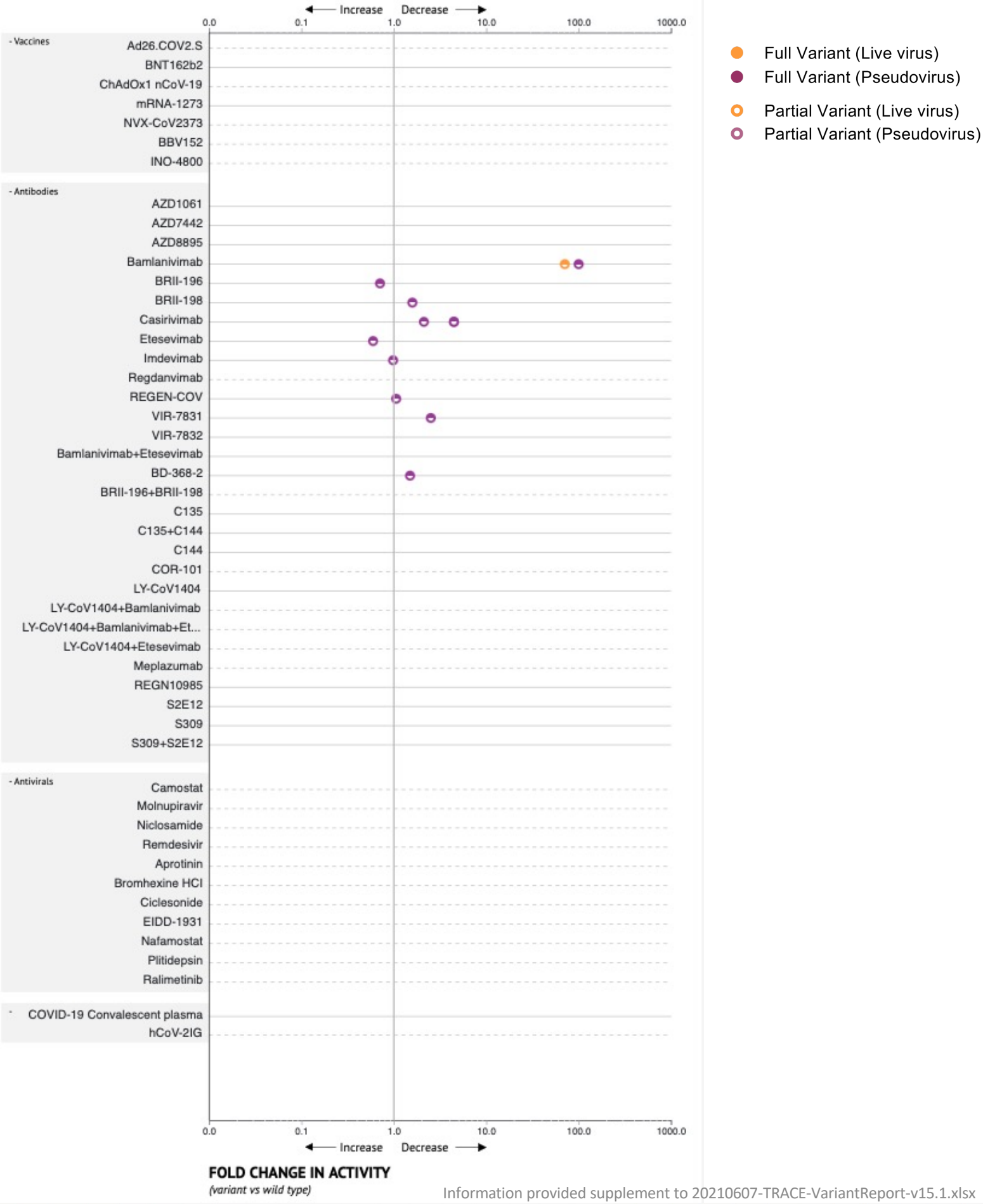
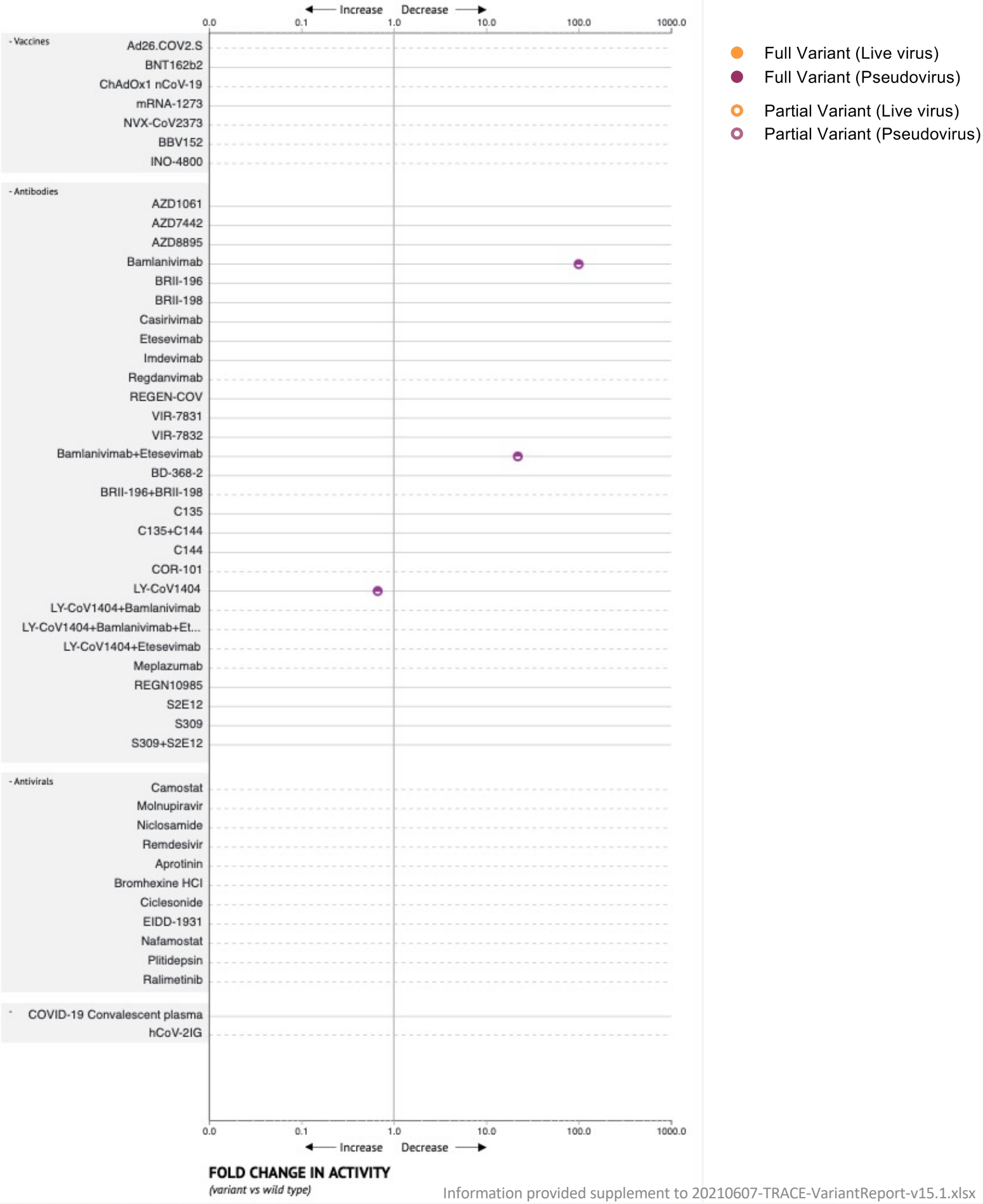
E484K Single Mutation Variant | Reported *in vitro* Therapeutic Activity



K417N Single Mutation Variant | Reported *in vitro* Therapeutic Activity



S494P Single Mutation Variant | Reported *in vitro* Therapeutic Activity



E484Q Single Mutation Variant | Reported *in vitro* Therapeutic Activity