# TiterSafe™ Influenza Virus-Like Particles

A safe substitute for live virus in hemagglutination assays

#### TiterSafe Virus-Like Particles

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TiterSafe from Integral Molecular is a ready-touse, virus-free reagent validated to provide a safe alternative to live virus in hemagglutination inhibition assays (HAI).

TiterSafe virus-like particles contain influenza surface proteins: **hemagglutinin (HA)**, **neuraminidase (NA)**, and an interior protein core. Since the particles do not contain RNA or DNA components that enable replication and infection, they can be used safely in standard laboratory settings without special containment.

The HA protein on TiterSafe particles behaves like HA on live virus in experiments, sticking to red blood cells and causing them to clump, or "agglutinate". TiterSafe particles are available to use in HAI assays in convenient, consistent, readyto-use aliquots.

With TiterSafe you can focus on generating data, not generating reagents!



## Advantages of TiterSafe

- Ready-to-use, quality-controlled reagent
- Non-replicative and safe in BSL-2
- Easy to substitute in existing HAI assays
- Available for seasonal and custom strains

## **TiterSafe Hemagglutination Inhibition** (Influenza B Particles)



#### A. Schematic of HAI assay.

**B.** Immune serum inhibits agglutination of TiterSafe particles (B/Austria/1359417/2021) indicating the presence of antibodies that bind this strain of HA.

### **Catalog of Seasonal and Pandemic Strains**

Influenza Virus Subtype	Catalog No.
Influenza A (H5N1)	HAP-1214
Influenza A (H3N2)	HAP-1212
Influenza A (H1N1)	HAP-1213
Influenza B (Victoria)	HAP-1302
Influenza B (Yamagata)	HAP-1303

New products will be released as new seasonal and pandemic strains are announced. Custom strains are available upon request.

Visit our <u>website</u> for the full listing of TiterSafe particles.

With two decades of virology experience, Integral Molecular is the industry leader in providing virology solutions that enable any laboratory to work safely with viruses.

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# Integral Molecular's Virology & **Membrane Protein Solutions**

# **OUR MISSION**

Founded in 2001, Integral Molecular's mission is to develop and apply innovative technologies that advance therapeutic discovery against difficult protein targets including viral proteins.

# WHY WORK WITH US

Deep expertise in virology is at the core of Integral Molecular's 20-year history. Our technologies and R&D services enable over 400 companies working in vaccine research and drug discovery and have 350 peer-review been published in over publications including in Cell, Science, and Nature.

Over the past 10 years, scientists at Integral Molecular have been on the forefront of combatting viral epidemics such as Zika, Ebola, and Chikungunya, in addition to working on dengue, HIV, RSV, Hepatitis C, Hepatitis B, Equine Encephalitis, and influenza viruses.



## Virology

The most comprehensive catalog of **Reporter Virus Particles, including** SARS-CoV-2, dengue, Zika, and influenza



## **Epitope Mapping**

Conformational, high-resolution mapping to characterize antiviral antibodies, help predict viral escape and optimize MAb cocktails



# MAb Specificity Profiling

The largest array of membrane proteins for in vitro safety & specificity profiling of antibodybased therapeutics



Virus-like particles with highconcentration, native proteins for immunization and screening

# **MPS Antibody Discovery**

MAbs against highly conserved, structurally complex membrane proteins delivered with >95%

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