



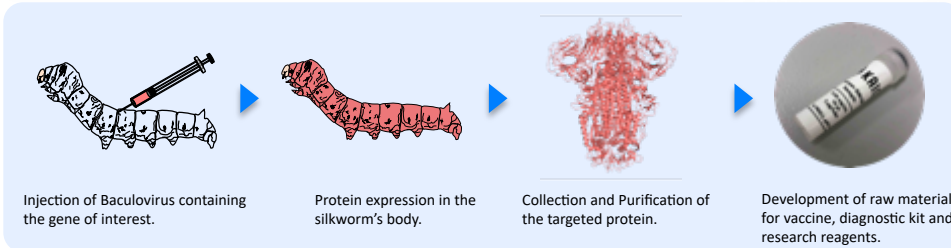
# Protein Production Platform with Silkworm System

## MISSION

KAICO is a Kyushu University startup with a mission of "Academic Value to Social Value".  
We produce useful but difficult-to-express proteins at high speed and low cost.

### Core technology: Silkworm-baculovirus expression system

- Suitable to produce complex protein due to PTMs similar to mammalian.
- Large scale productions only by breeding silkworms.



World's only silkworm bio resource library at Kyushu University(JP).

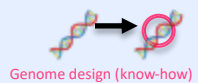


Breeding History  
Abt. 100 years

Inbred strains  
Abt. 450 type



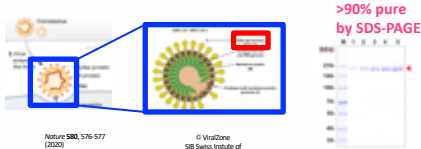
Baculovirus (Patent)



Genome design (know-how)

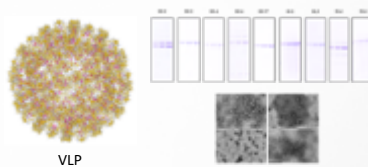
### Vaccines

#### 1. SARS-CoV-2 Spike glycoprotein



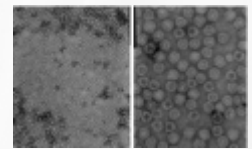
- SARS-CoV-2 trimeric Spike protein in high purity and quality.
- Neutralizing antibody induced in mice experiments.

#### 2. Norovirus VLPs (Virus like particles)



- Norovirus GI and GII type VLPs in high purity and quality.
- High titers of antibody confirmed in mice experiments

#### 3. Porcine infectious virus VLPs



- High productivity: 500 shots/silkworm
- Co-development with Japanese animal pharm companies.
- GMP production facility ready to use in 2021

### Diagnostic kits

#### 1. SARS-CoV-2 antibody detection kit



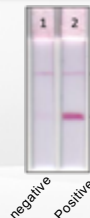
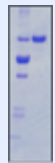
We have co-developed SARS-CoV-2 antibody detection kit with Protects Co.,Ltd(JP). This kit contains our recombinant S protein and recombinant anti-SARS-CoV-2 S protein antibody. The home finger-prick blood test service is launched from Oct 2020.

#### 2. Immunochromatographic strip test for canine Babesiosis



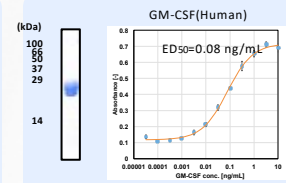
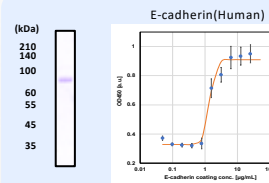
*Hemaphysalis* spp.

*Babesia gibsoni*  
Thrombospondin-related adhesive proteins (BgTRAPs)



Control Line  
Anti-BgTRAP antibody  
Test Line  
BgTRAP antigen

### Reagents



SCF(Human) / TNF- $\alpha$ (Human) / Vitronectin (Human) / VEGFa121(Human) / bFGF(Human) / Interleukin-3(Mouse)  
**NEW!** SARS-CoV-2 spike protein / Anti-SARS-CoV-2 antibody / Norovirus GI.2, GI.3, GII.3, GII.4, GII.17 VLPs etc.

Please refer to our brochures in detail.

### Protein Expression Service

We produce a protein expression and purification service. Please contact us if you are interested in this service.

### Collaborated with



### Contact

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Please visit our web site!

