Two-vector vaccine against coronavirus
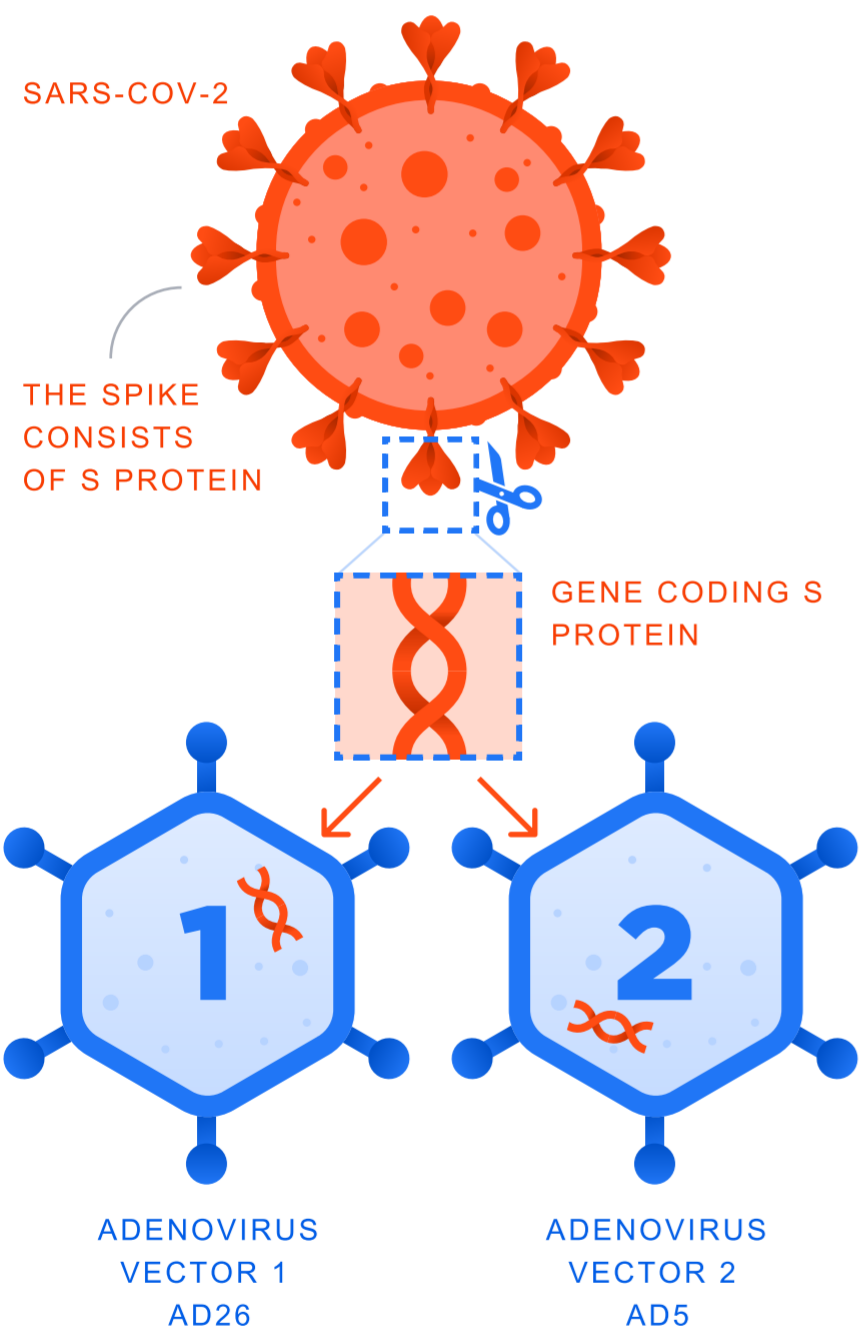
1 Vector creation

A vector is a virus that lacks a gene responsible for reproduction and is used to transport genetic material from another virus that is being vaccinated against into a cell. The vector does not pose any hazard to the body. The vaccine is based on an adenoviral vector which normally causes acute respiratory viral infections

SARS-COV-2

THE SPIKE CONSISTS OF S PROTEIN

GENE CODING S PROTEIN

1

2

ADENOVIRUS VECTOR 1 AD26

ADENOVIRUS VECTOR 2 AD5

A gene coding S protein of SARS-COV-2 spikes is inserted into each vector. The spikes form the "crown" from which the virus gets its name. The SARS-COV-2 virus uses spikes to get into a cell

2 First vaccination

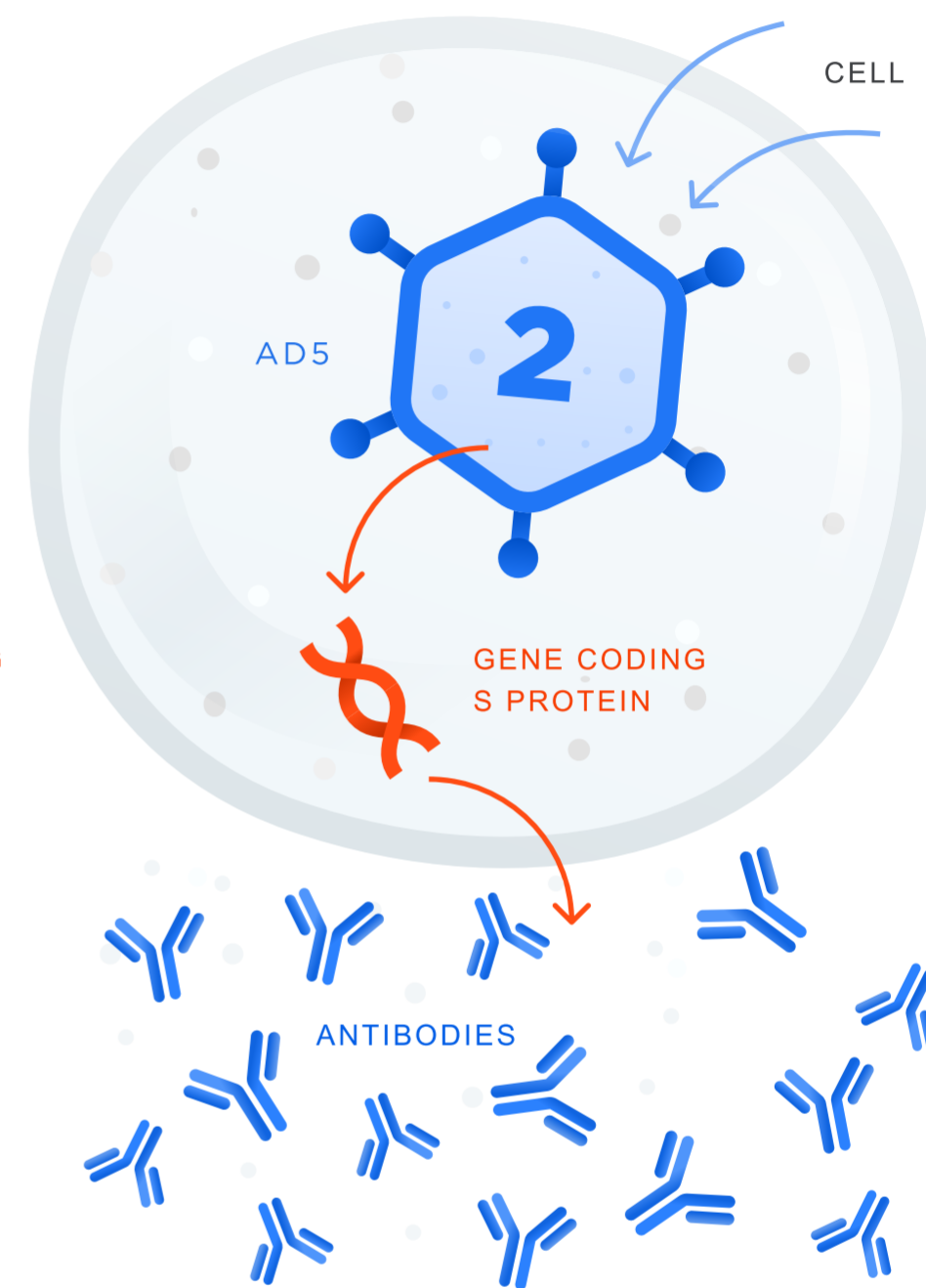Vector with a gene coding S protein of coronavirus gets into a cell

CELL

1

AD26

GENE CODING S PROTEIN

ANTIBODIES
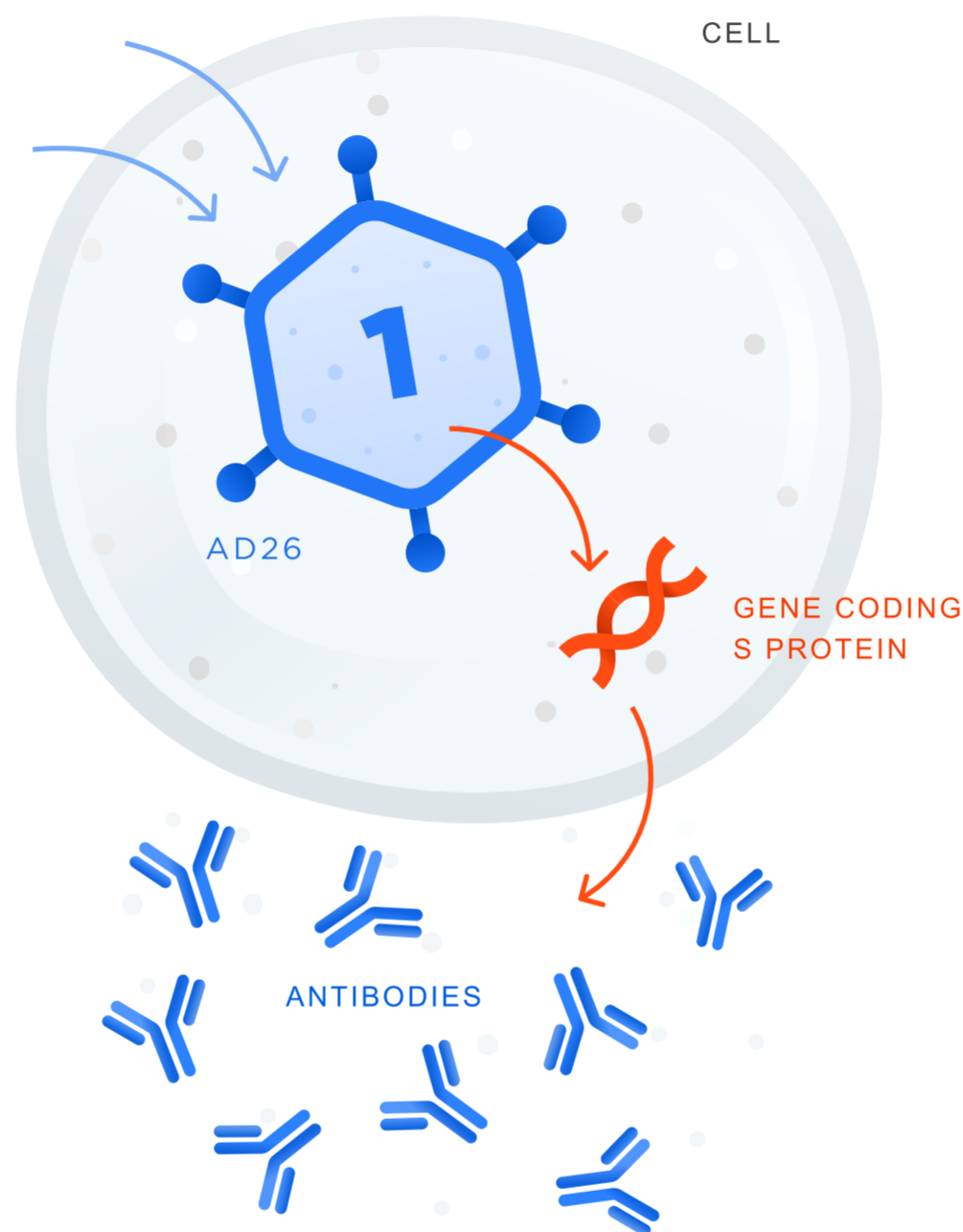
The body synthesizes S protein, in response, the production of immunity begins

3 Second vaccination

Repeated vaccination takes place in 21 days

CELL

AD5

2

GENE CODING S PROTEIN

ANTIBODIES

The vaccine based on another adenovirus vector unknown to the body boosts the immune response and provides for long-lasting immunity

The use of two vectors is a unique technology of the Gamaleya Center making the Russian vaccine different from other adenovirus vector-based vaccines being developed globally