

Anti-SARS-CoV-2 Monoclonal Antibodies (mAb)

Investigational medications approved for emergency use in patients by the FDA

May reduce progression to severe disease and shorten recovery in high-risk patients

CHEST

Supported by Regeneron

Last updated January 6, 2022
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INDICATIONS

- For **treatment** of patients (≥ 12 years) with **mild to moderate** COVID-19 and **NOT requiring hospitalization or supplemental oxygen**
- For **post-exposure prophylaxis (PEP)** in patients (≥ 12 years) who are nonvaccinated, incompletely vaccinated, or immunocompromised
- Must be given **within 10 days** of first symptoms of COVID-19 (or exposure for PEP)
- Treatment is usually IV; good evidence for SC administration for PEP and can be given SC if IV not feasible for treatment

TYPES AVAILABLE IN THE US

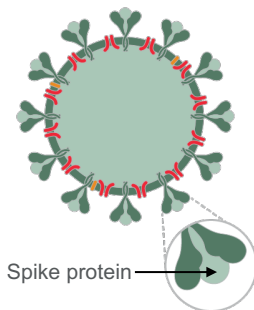
Bamlanivimab plus etesevimab	Neutralizing mAbs that bind to different, but over-lapping, epitopes in the spike protein of SARS-CoV-2. Active against Delta; not active against Omicron.
Casirivimab plus imdevimab (REGEN-COV)	Recombinant human mAbs that bind to nonoverlapping epitopes in the spike protein of SARS-CoV-2. Active against Delta; not active against Omicron.
Sotrovimab	Originally identified in 2003 from a SARS survivor; targets an epitope conserved between SARS-CoV-1 and SARS-CoV-2. Active against Omicron.

NIH GUIDELINES: WHO SHOULD GET mAb THERAPY?

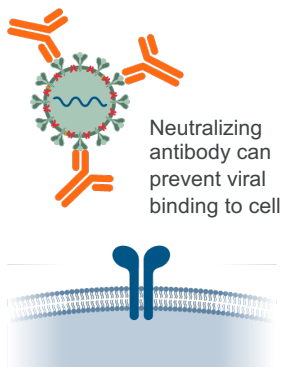
- Aged ≥ 65 years
- Obesity (BMI >30)
- Diabetes mellitus
- Cardiovascular disease
- Chronic lung diseases
- An immunocompromising condition or immunosuppressive treatment (eg, transplant, rheumatic diseases, HIV infection)
- Chronic kidney disease
- Pregnancy
- Sickle cell disease
- Neurodevelopmental disorders (eg, cerebral palsy) or other conditions that confer medical complexity (eg, genetic or metabolic syndromes and severe congenital anomalies)
- Medical-related technological dependence (eg, tracheostomy, gastrostomy, or positive pressure ventilation that is not related to COVID-19)

SEVERAL MECHANISMS OF ACTION

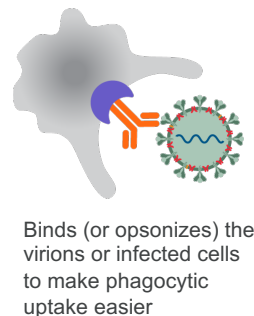
SARS-CoV-2



Neutralization



Opsonization



Can cause apoptosis or necrosis of the infected cell through complement fixation and membrane attack complex activation or antibody-dependent cytotoxicity

Complement-dependent cytotoxicity

