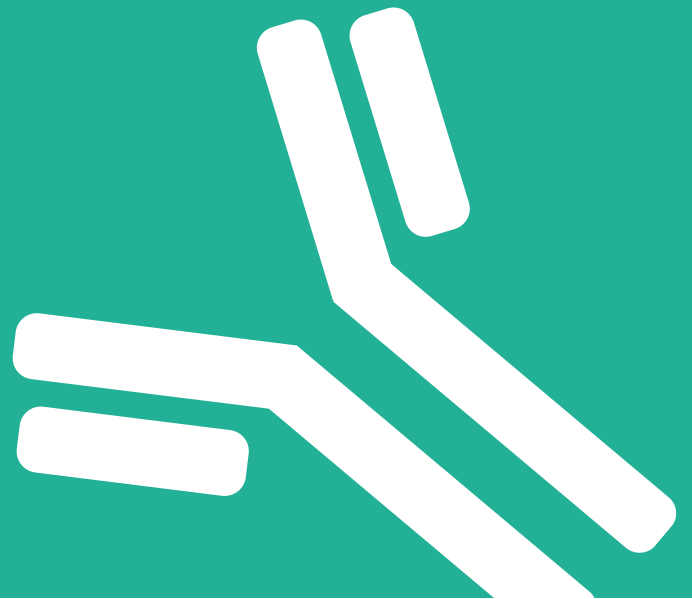


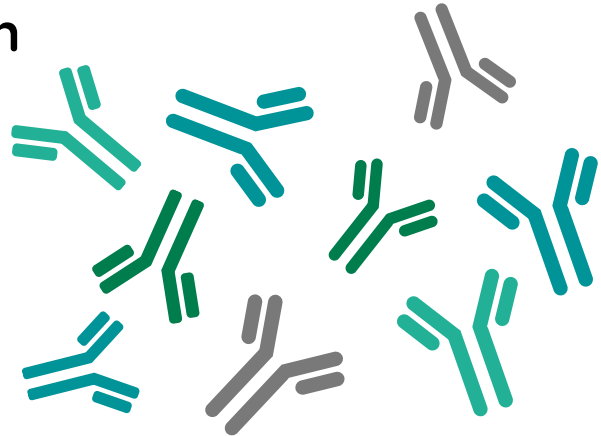


Overview of Monoclonal Antibodies



What are monoclonal antibodies?

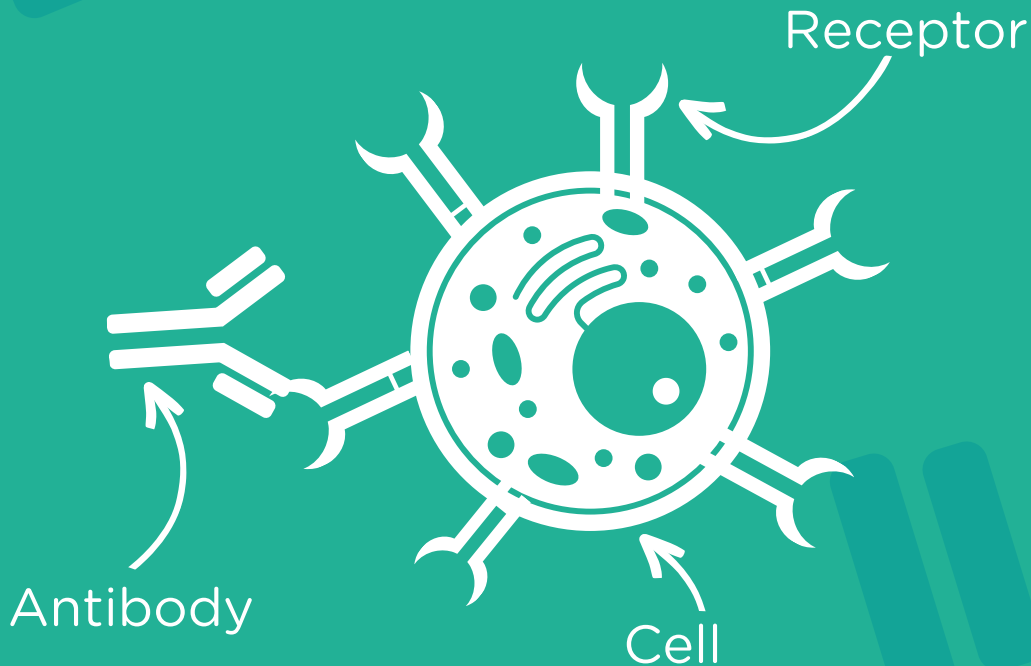
Antibodies, also known as immunoglobulins, are large, Y-shaped proteins produced by the body's immune system.



Monoclonal antibodies (mAb) are protein structures made in a laboratory to act like naturally occurring antibodies.

What do antibodies do?

Each type of antibody has a distinct structure that can identify a unique object in the body, like a specific cell receptor.



It is this ability that makes antibodies a great candidate for medical treatments.

How can antibodies be used as treatments?

There are a number of ways antibodies can be used as medical treatments, including*:

- Attaching to receptors to disrupt their function
- Attaching to pathogens, toxins, or foreign objects to stop their activity or boost the immune system's ability to recognize and destroy them
- Delivering a drug or a toxin to a specific site in the body

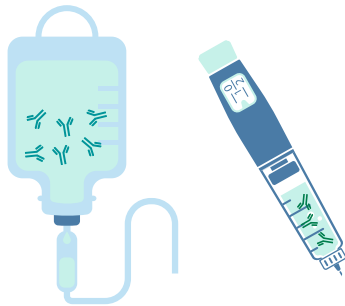
*These are select examples.

How many antibody treatments are there?

Since 1986, hundreds of antibody therapies have been approved by regulatory agencies, such as the US Food and Drug Administration, as treatments for a variety of conditions.



With innovations in antibody engineering and technology there are currently an additional 1200+ potential antibody therapies being tested in clinical studies.

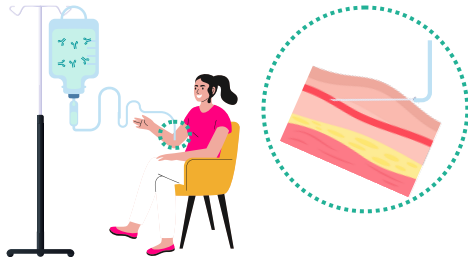


How are antibody treatments administered?

Because antibodies can get digested and inactivated when given orally, they are commonly administered either as an intravenous infusion or subcutaneous injection.

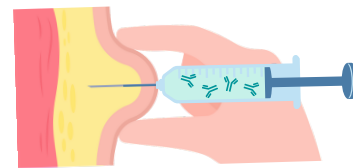
Intravenous Infusion (IV)

Treatment injected into a person's vein, often given at an infusion center.



Subcutaneous Injection (SC)

Treatment injected under the skin at either a healthcare clinic or self-injected at home.



Resources & References

Cleveland Clinic, Monoclonal Antibodies

<https://my.clevelandclinic.org/health/treatments/22246-monoclonal-antibodies>

Cognito Education, Monoclonal Antibodies

<https://youtu.be/XrUW54Ea598>

Fuse School, Monoclonal Antibodies

<https://youtu.be/M3zllm8QbCM>

Kaplon H, Crescioli S, Chenoweth A, Visweswaraiah J, Reichert JM. Antibodies to watch in 2023. MAbs. 2023 Jan-Dec 15 (1).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9728470/>

Malik B, Ghatol A. Understanding How Monoclonal Antibodies Work. [Updated 2022 Jul 4]. In: StatPearls [Internet].

<https://www.ncbi.nlm.nih.gov/books/NBK572118/>

World Health Organization, Monoclonal Antibodies (mAbs)

<https://www.who.int/teams/health-product-policy-and-standards/standards-and-specifications/monoclonal-antibodies>

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