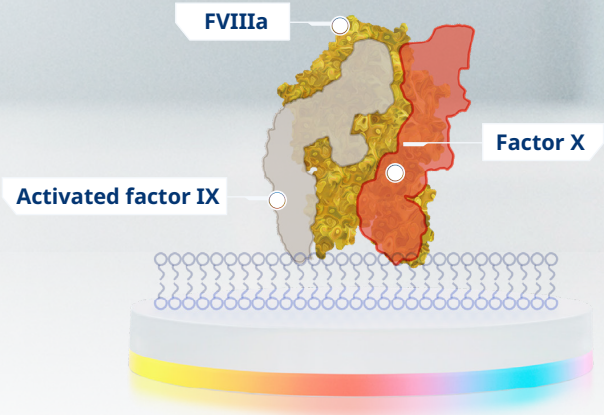


Factor VIIIa mimetic optimization: What is mimetic optimization?

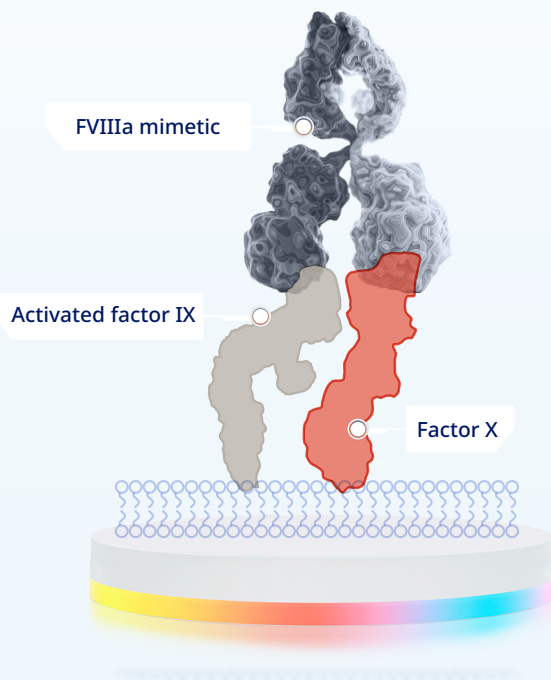
The role of factor VIII

- In hemophilia A, which is the most common type of hemophilia, there is a lack of or defect in one of the proteins in the body, called factor VIII.
- Without enough working factor VIII, it is more difficult for blood to form a clot. This is because factor VIII needs to be activated and bind to or work together with clotting factors such as factor IXa and factor X for clotting to happen effectively.

In people without a bleeding disorder, activated factor VIII (FVIIIa) binds to activated factor IX and factor X



FVIIIa mimetics also bind to activated factor IX and factor X



What are FVIIIa mimetics?

- FVIIIa mimetics are monoclonal antibodies that are designed to mimic the action of activated factor VIII (FVIIIa) in the body.



Monoclonal antibodies are a type of protein that recognize and bind to a target(s) in the body.



- These mimetics provide an alternative way to enhance clotting without relying on traditional factor replacement therapies.
- By mimicking how natural FVIIIa works in the clotting process, these mimetics help your blood to clot normally, even when natural factor VIII levels are low or absent.
- Although they work similarly, currently available FVIIIa mimetics are not as effective as natural FVIIIa in the clotting process.

Optimizing Factor VIIIa mimetics



Researchers are working to further improve FVIIIa mimetics through a process called “optimization,” in which they tweak the structure of these antibodies to make them work better.



By making small changes to the structure of these antibodies, researchers can develop molecules that can more closely mimic the activity of natural FVIIIa.



Even small changes can make a big difference to how the antibody interacts with the factors in your blood, such as where the antibody binds to the factors and how tightly they attach. This can affect how much antibody is needed to prevent bleeding.



Through ongoing research efforts, optimized FVIIIa mimetics may more closely mimic the actions of natural FVIIIa in preventing bleeding.



If you want to learn more about how FVIIIa mimetics work, ask your doctor to explain their mechanism of action.



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