Rotating scFv fragment with highlighted complementary determining regions (CDRs)

The two possible structures of a single-chain variable fragment, with the antigen binding sites including the N-termini on the left and the C-termini on the right. The linker peptides are shown as arrows. A single-chain variable fragment (scFv) is not actually a fragment of an antibody, but instead is a fusion protein of the variable regions of the heavy (VH) and light chains (VL) of immunoglobulins, connected with a short linker peptide of ten to about 25 amino acids.

The linker is usually rich in glycine for flexibility, as well as serine or threonine for solubility, and can either connect the N-terminus of the VH with the C-terminus of the VL, or vice versa.

This protein retains the specificity of the original immunoglobulin, despite removal of the constant regions and the introduction of the linker.

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