ANTIBODY LOCKER FOR THE INACTIVATION OF PROTEIN DRUG

ABSTRACT

Disclosed herein is a hinge antibody capable of being selectively activated in a target cell or tissue to treat a condition therein. The hinge antibody includes a functional antibody, two inhibitory domains and four cleavable linkers. The functional antibody is capable of treating the condition in an activated state, and has two light chains and two heavy chains. Each inhibitory domain includes a hinge domain of an immunoglobulin and consists of two peptide arms. Each cleavable linker includes a peptide substrate cleavable by an enzyme specifically or highly expressed in the target cell or tissue, and connects one of the peptide arms of the inhibitory domains to the N-terminal of one of the light chains and heavy chains of the functional antibody. Also disclosed herein are methods for preparing and using this hinge antibody.

Fig. 2