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(54) Title: SPECIFIC CONJUGATION FOR AN ANTIBODY-DRUG CONJUGATE

(57) Abstract: Provided herein is a process for preparing a homogeneous conjugate of an antibody or antibody-like protein via linkage of cysteine sites between heavy-light chains in the IgG antibody or antibody-like protein. Provided herein also are methods of making the conjugates in a specific manner comprising either generation of specific thiols of an antibody or antibody-like protein agent, followed by reaction with drug/linker complexes, or generation of specific thiols of an antibody or antibody-like protein agent and conjugation of a synthetic linker-drug assembly with the thiols simultaneously in one pot reaction, to provide conjugates with over 75%, in most cases more than 80% of payloads linked at the specific cysteine sites between heavy-light chains of the IgG antibody or antibody-like protein. It also relates to methods of using the homogeneous conjugate in targeted prophylaxis or treatment of cancer, infection and immunological disorders.



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