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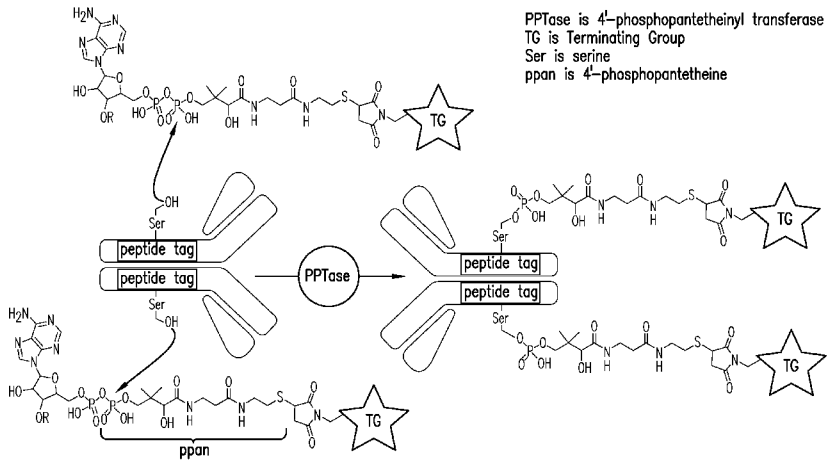


FIG.1

(57) Abstract: The present disclosure provides methods of site-specific labeling of antibodies, using proteins having 4'-phosphopantetheinyl transferase activity that catalyze post-translational modification of peptide sequences ("peptide tags") incorporated into one or more specific sites of an antibody of interest. Enzymatic labeling enables quantitative and irreversible covalent modification of a specific serine residue within the peptide tags incorporated into the antibody, and thus creates desirable antibody conjugates.

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