
Copper(II)-THPTA catalytic buffer, 1.5x

<http://www.lumiprobe.com/p/protein-labeling-buffer-thpta>

Catalytic buffer is suitable for coupling of azide- or alkyne-modified protein with alkyne- or azide- bearing dye via Cu(I)-catalyzed azide-alkyne cycloaddition ([CuAAC](#)). THPTA ligand accelerates the reaction rate due to the stabilization of a catalytically active Cu (I). Moreover, the presence of water-soluble THPTA allows the protein labeling to be run in aqueous solution and, by chelating free copper, minimizes the generation of ROS (reactive oxygen species) and undesired damage of proteins. Aminoguanidine prevents connections of reactive aldehydes, which are products of dehydroascorbate hydrolysis, with arginine, N-terminal cysteine, and lysine side-chains. Ready-to-use 1.5x buffer provides all the necessary reagents to perform the CuAAC reaction, except a reagent for the reduction of Cu (II) into catalytically active Cu (I). As a reducing agent we recommend [ascorbic acid](#).

Buffer composition: Cu (II), triethylammonium acetate buffer pH 6.8, THPTA ligand, aminoguanidine

General properties

Storage conditions: Storage: 12 months after receipt at +4 or -20°C in the dark. Transportation: at room temperature for up to 3 weeks.