Fusion BioLabs Short Protocol for Reduction of Thiol Modified Aptamer

Thiol modified aptamer is shipped in its oxidized (disulfide) form in 1xTE solution or in lyophilized powder and is required chemical reduction by Tris(2-carboxyethyl) phosphine (TCEP) prior to each use.

Because TCEP does not contain thiols, it does not have to be removed from solutions before performing reactions involving maleimide labeling or cross-linking.

Following is the protocol for the reduction of thiol-modified aptamer.

1. Spin down tubes containing 25 mM TCEP solution and thiol modified aptamer at room temperature.
2. Add all of the 25 mM TCEP solution (40 µl for 10 nmol aptamer; 120 µl for 30 nmol aptamer) into the tube with thiol modified aptamer.
3. Mix and spin down and incubate the mixture for 1 hour at room temperature to reduce the aptamer to get the reduced dithiol modified aptamer.
4. It is ready to be used for downstream application, such as maleimide labeling or cross-linking.

Kit contents

The following components are included in the Kit.

SKU	Component	Quantity
APT-XXXTH-10	Single strand DNA, a lyophilized powder or in solution	10 nmol
	40 µl TCEP (25 mM) solution	1 µmol
APT-XXXTH-30	Single strand DNA, a lyophilized powder or in solution	30 nmol
	120 µl TCEP (25 mM) solution	3 µmol

- Store at -20°; reagents are guaranteed stable for 12 months when properly stored.