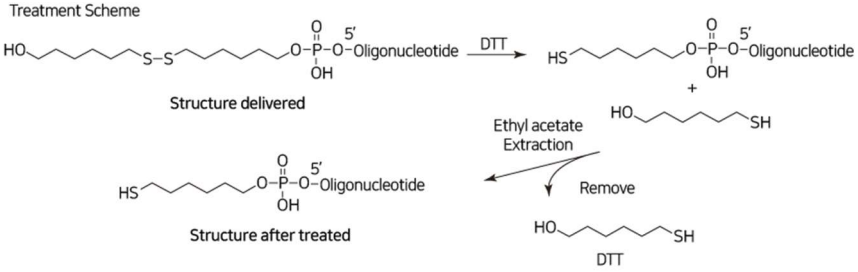
Experimental Procedures

Steps		Procedure Details
		
1	 **Dissolve dried oligonucleotides**	1. Dissolve the dried thiol-modified oligonucleotide (5 O.D. based) with 50 µl of nuclease-free water or an appropriate buffer, e.g., 0.1 M triethylammonium acetate (TEAA), pH 7.5.
2	 **Incubate the mixture**	2. Add 10 µl of 1 N dithiothreitol (DTT)* into an oligonucleotide tube and mix by vortexing and briefly spin down. * 1 N DTT: Dissolve 1.545 g of DTT in 20 ml of 0.01 M Sodium acetate, pH 5.2 and filter with 0.22 µm syringe filter. 3. Incubate the mixture for 15 min at room temperature.
	 **Remove excess DTT with ethyl acetate**	4. After the incubation, add 50 µl of ethyl acetate to remove excess DTT and unwanted thiol fragments from the thiol-modified oligonucleotide mixture and mix by vortexing. 5. The mixture will separate into two layers, discard the upper layer of the mixture after it is separated. * **Note:** Upper layer contains DTT with ethyl acetate and lower layer contains oligonucleotides in the aqueous phase. 6. Proceed immediately to the next step since the free sulfhydryl group becomes unstable after the removal of DTT. 7. Repeat step 4-6, 3 times.