

31 August 2017 : Titration ssDNA trigger in lysate

1. Aim:

Titration of short ssDNA trigger in M15 T7 lysate to determine the limit of detection.

2. Materials:

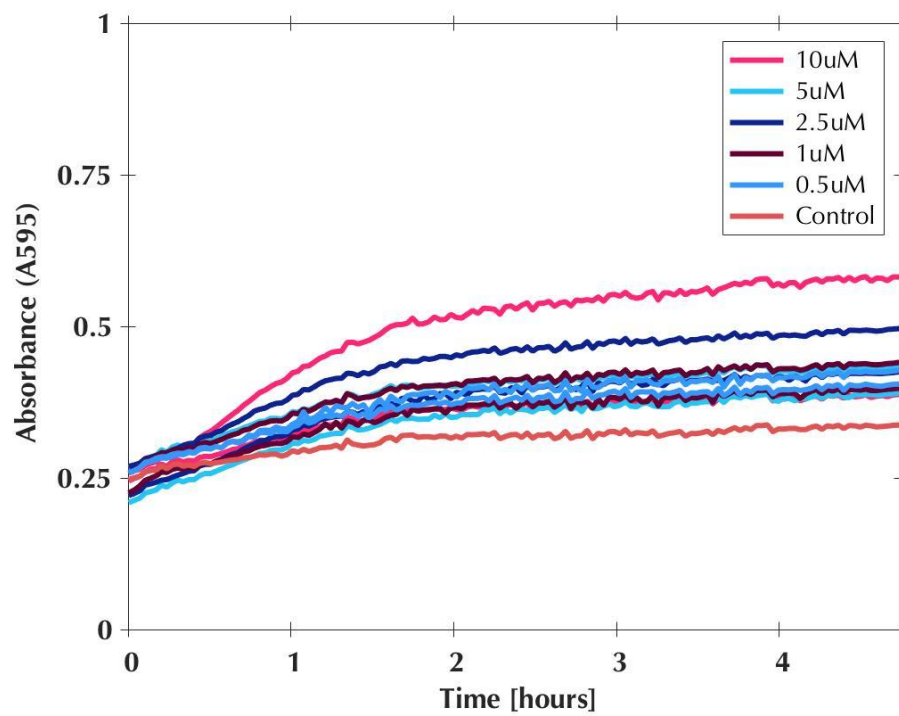
- Nuclease-free water
- LacZalpha toehold DNA
- ssDNA short trigger
- M15 T7 lysate
- Top10-GamS lysate
- Buffer A
- Energy solution
- Substrate
- Plate reader

3. Procedure:

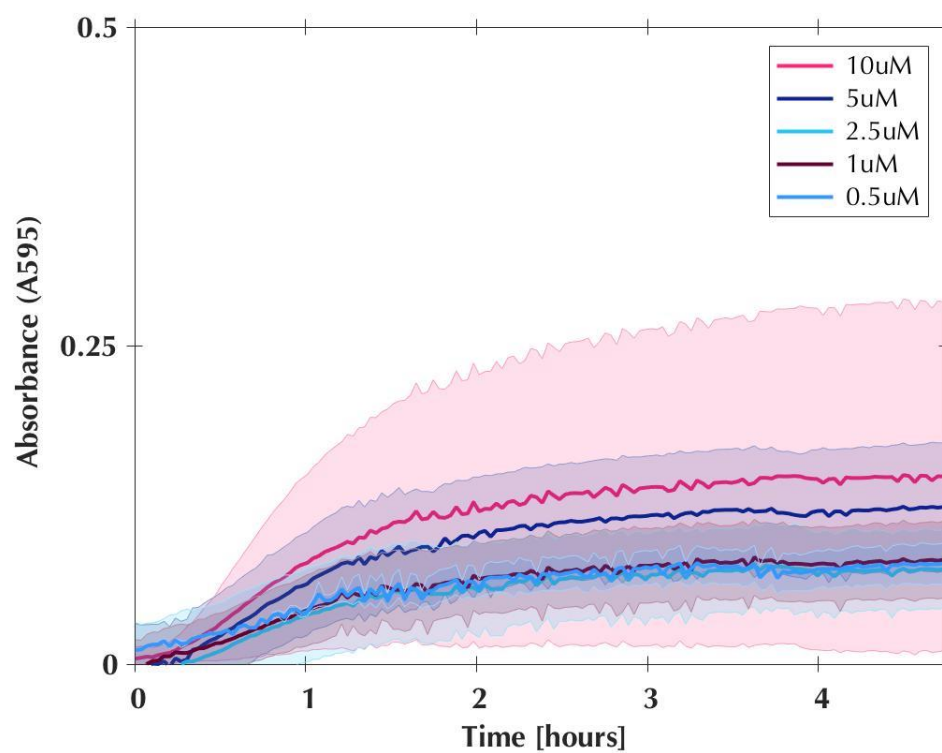
Stock concentration	Working concentration	Which trigger	Trigger quantity	Which DNA	DNA quantity	Which lysate	Lysate quantity	Top10-GamS lysate	Energy solution	Buffer A	H2O	Substrate
500	10	ssDNA short	0.2	Toehold LacZalpha	0.600	M15 T7	1.25	1.25	2.5	2.5	1.500	0.2
50	5	ssDNA short	1	Toehold LacZalpha	0.600	M15 T7	1.25	1.25	2.5	2.5	0.700	0.2
50	2.5	ssDNA short	0.5	Toehold LacZalpha	0.600	M15 T7	1.25	1.25	2.5	2.5	1.200	0.2
50	1	ssDNA short	0.2	Toehold LacZalpha	0.600	M15 T7	1.25	1.25	2.5	2.5	1.500	0.2
5	0.5	ssDNA short	1	Toehold LacZalpha	0.600	M15 T7	1.25	1.25	2.5	2.5	0.700	0.2
		ssDNA short	0	Toehold LacZalpha	0.600	M15 T7	1.25	1.25	2.5	2.5	1.700	0.2

4. Results :

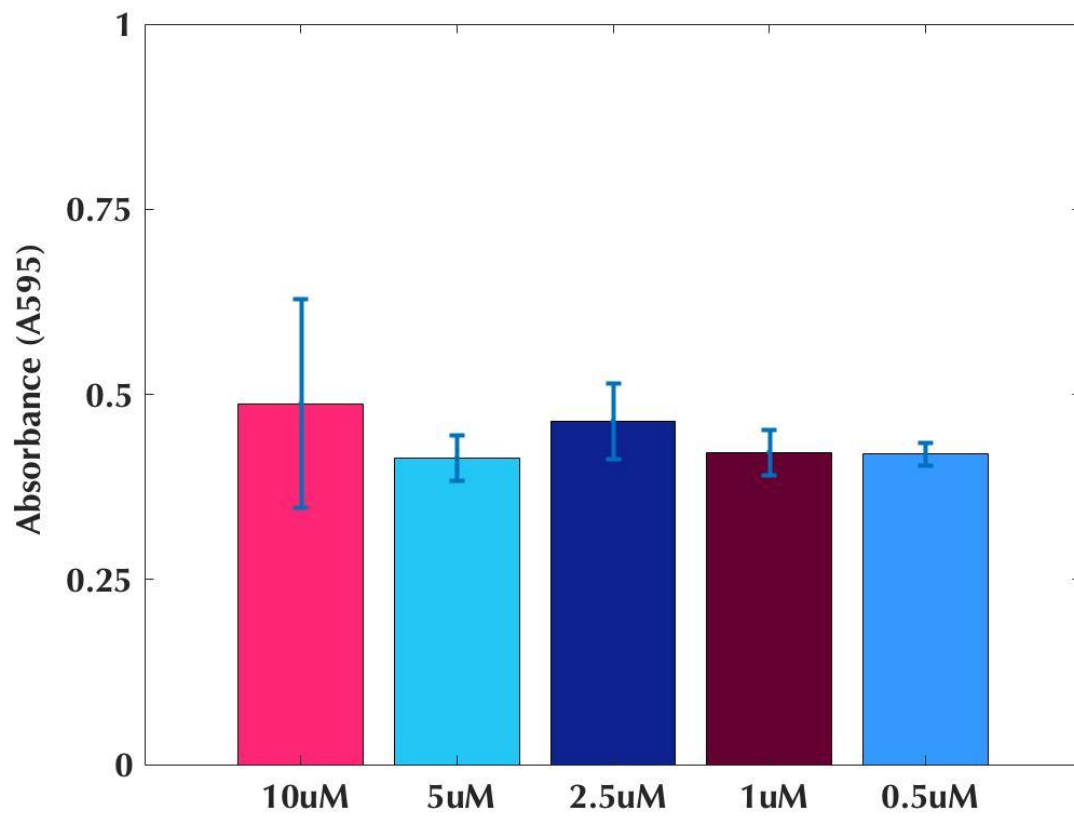
Graphs showing all data points during the whole experiment :



Graph showing shaded error bars :



End point measurements after six hours (the control was subtracted):



5. Conclusion:

We can see that the titration is not well represented in the end point measurements. This dilution experiment should be repeated with triplicates instead of duplicates, since all measures lie close together.