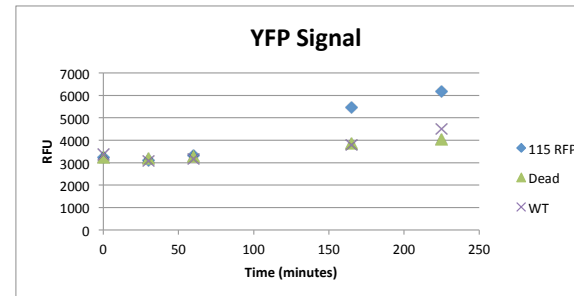
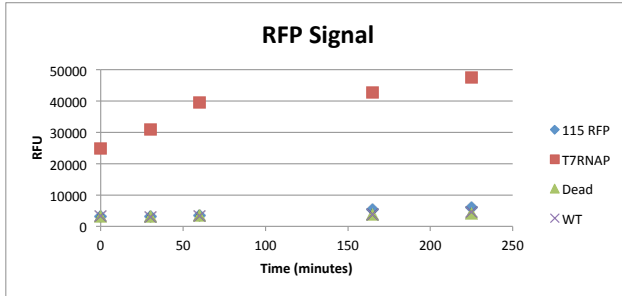


Data:

September 22, 2014

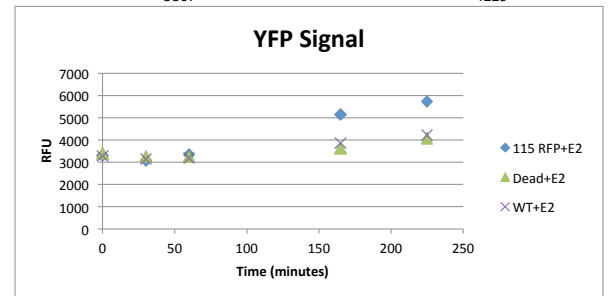
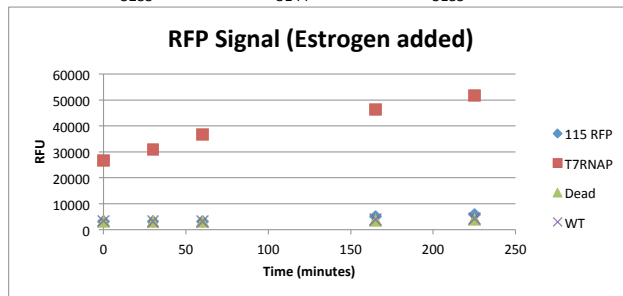
- Transform Sensor into Top10 Cells

Samples	Time (minutes)													
	0	15	30	45	60	75	90	105	120	165	180	195	210	225
115 RFP	3209		3107		3330					5475				6187
T7RNAP	24810		31044		39381					42593				47499
Dead	3207		3185		3276					3862				4036
WT	3377		3087		3168					3792				4519

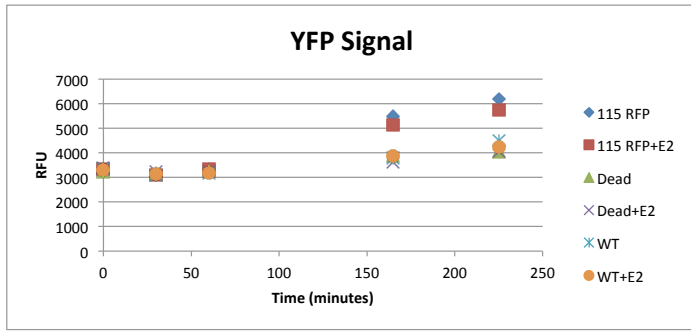


Samples	Time (minutes)													
	0	15	30	45	60	75	90	105	120	165	180	195	210	225
115 RFP	3209		3107		3330					5475				6187
Dead	3207		3185		3276					3862				4036
WT	3377		3087		3168					3792				4519

Samples	Time (minutes)													
	0	15	30	45	60	75	90	105	120	165	180	195	210	225
115 RFP	3320		3107		3333					5122				5732
T7RNAP	26557		30857		36641					46325				51735
Dead	3390		3244		3240					3616				4046
WT	3283		3144		3185					3867				4229



Sample	Time (minutes)													
	0	15	30	45	60	75	90	105	120	165	180	195	210	225
115 RFP	3209		3107		3330					5475				6187
115 RFP+E2	3320		3107		3333					5122				5732
Dead	3207		3185		3276					3862				4036
Dead+E2	3390		3244		3240					3616				4046
WT	3377		3087		3168					3792				4519
WT+E2	3283		3144		3185					3867				4229



Sample	Time (minutes)													
	0	15	30	45	60	75	90	105	120	165	180	195	210	225
Dead	3207	3185	3185	3276	3276					3862				4036
Dead+E2	3390	3244	3244	3240	3240					3616				4046
WT	3377	3087	3087	3168	3168					3792				4519
WT+E2	3283	3144	3144	3185	3185					3867				4229

September 23, 2014

Initial evaluation of sensor in MACH Cells

t0				Average	StDev
YFP+RFP	3049	3015	3080	3048	33
T7RNAP	7976	7678	6793	7482	615
Dead	3140	3103	3200	3148	49
WT	3214	3243	3158	3205	43
t30m					
YFP+RFP	2562	2652	2668	2627	57
T7RNAP	7261	7119	6556	6979	373
Dead	2849	2931	2930	2903	47
WT	2906	2875	3025	2935	79
t1h					
YFP+RFP	2741	2827	2763	2777	45
T7RNAP	7262	7250	6689	7067	327
Dead	2877	2855	2787	2840	47
WT	3053	2816	2815	2895	137
t1h30m					
YFP+RFP	2776	2688	3773	3079	603
T7RNAP	7315	7210	6536	7020	423
Dead	2845	2802	2846	2831	25
WT	2876	2890	2846	2871	22
t2h					
YFP+RFP	2670	2817	2456	2648	182
T7RNAP	7241	7232	8166	7546	537
Dead	2713	2885	2809	2802	86
WT	2688	2710	2875	2758	102
t20hours					
YFP+RFP	5167	4443	5842	5151	700
T7RNAP	79555	86040	62065	75887	12401
Dead	4562	5271	5544	5126	507
WT	7281	6177	6120	6526	654

September 24, 2014

This data is from MACH cells because they grow fast. This is an intermediate evaluation to see if the sensors would respond.

The RNAP and sensors did not have YFP expressed so the signal is background in that channel. The YFP channel was monitored in anticipation of YF

RFP	Average					SD	YFP	Average					SD
t0							t0						
YFP+RFP	2533	2639	2597	2590	53		4476	5742	5858	5359	767		
T7RNAP	13003	15149	13777	13976	1087		3360	3422	3535	3439	89		
Dead	2840	3031	2958	2943	96		3265	3511	3574	3450	163		
WT	2896	2868	3047	2937	96		3438	3694	3453	3528	144		
t30min							t30min						
YFP+RFP	2687	2654	2639	2660	25		7151	6280	6496	6642	454		
T7RNAP	15405	16073	17281	16253	951		3542	3585	3501	3543	42		
Dead	2962	3052	3069	3028	58		3605	3747	3547	3633	103		
WT	3017	2972	3018	3002	26		3585	3455	3426	3489	85		
t60min							t60min						
YFP+RFP	2727	2716	2649	2697	42		3914	3870	3958	3914	44		
T7RNAP	18270	19676	19903	19283	885		3591	3423	3613	3542	104		
Dead	3115	3095	3198	3136	55		3635	3624	3655	3638	16		
WT	3324	2949	3025	3099	198		3514	3449	3634	3532	94		
t90min							t90min						
YFP+RFP	2572	2725	2708	2668	84		3943	3636	3680	3753	166		
T7RNAP	17891	18997	18667	18518	568		3506	3445	3513	3488	37		
Dead	2964	2921	3176	3020	137		3462	3498	3566	3509	53		
WT	2840	3389	2902	3044	301		3453	3525	3549	3509	50		
t120							t120						
YFP+RFP	2795	2676	2701	2724	63		4157	4017	4148	4107	78		
T7RNAP	18563	18726	19663	18984	594		4243	4277	4390	4303	77		
Dead	2941	3075	2954	2990	74		3870	4132	3963	3988	133		
WT	3101	2948	2944	2998	90		4418	4135	4245	4266	143		
t150							t150						
YFP+RFP	2660	2614	2685	2653	36		4117	3739	4112	3989	217		
T7RNAP	17506	17467	17498	17490	21		4569	4495	4782	4615	149		
Dead	2785	2927	3004	2905	111		4445	4425	4715	4528	162		
WT	2745	2856	3118	2906	192		5151	4962	5236	5116	140		
YFP+RFP	2839	2931	2890	2887	46		3984	4079	4269	4111	145		
T7RNAP	21859	22826	22022	22236	518		4567	4643	4441	4550	102		
Dead	3079	3345	3098	3174	148		4934	4969	5010	4971	38		
WT	3137	3010	3193	3113	94		4917	5233	4284	4811	483		
t240							t240						
YFP+RFP	3071	2977	3064	3037	52		3965	4038	4140	4048	88		
T7RNAP	22980	24733	23143	23619	968		3791	3693	3722	3735	50		
Dead	3245	3526	3322	3364	145		3787	3918	3894	3866	70		
WT	3208	3113	3600	3307	258		4151	4014	4341	4169	164		
t20hours							t20hours						
YFP+RFP	5167	4443	5842	5151	700		5003	4098	4478	4526	454		
T7RNAP	79555	86040	62065	75887	12401		7834	7973	6213	7340	978		
Dead	4562	5271	5544	5126	507		4611	5699	8663	6324	2097		
WT	7281	6177	6120	6526	654		6888	6217	6247	6451	379		

September 26, 2014

- Testing for sensor in Top10 Cells

New sensors with YFP after RNAP, Dead and WT sensors. Readings for overnight cultures in red and yellow channels.

overnight culture	RFP	YFP
YFP+RFP	317	7871
T7	46120	4873
Dead	323	43081
WT	307	46093

Time series of RFP and YFP in MACH cells.

t0	RFP					YFP				
	avg	sd	avg	sd	avg	sd				
YFP+RFP	2526	2600	2690	2605	82	2317	2425	2624	2455	156
T7RNAP	74620	75144	79573	76446	2721	775	794	830	800	28
Dead	2638	2690	2710	2679	37	12651	13330	13618	13200	497
WT	2672	2715	2765	2717	47	14309	13497	13998	13935	410
t1h										
YFP+RFP	2440	2421	2529	2463	58	5218	5567	5562	5449	200
T7RNAP	74289.6	75474.3	79902.9	76556	2959	1302	1302	1331	1312	17
Dead	2631	2588	2659	2626	36	17969	18159	18022	18050	98
WT	2667	2751	2629	2682	62	19495	17496	17291	18094	1218
t1h30m										
YFP+RFP	2507	2458	2577	2514	60	6180	6654	6590	6475	257
T7RNAP	100988	102132	105868	102996	2552	1763	1725	1782	1757	29
Dead	2567	2740	2709	2672	92	22158	22265	21429	21951	455
WT	2578	2731	2844	2718	134	23487	20625	20973	21695	1562
t2h										
YFP+RFP	2462	2502	2521	2495	30	7131	7497	7714	7447	295
T7RNAP	152886	159156	159360	157134	3680	2646	2486	2637	2590	90
Dead	2660	2784	2554	2666	115	28943	29171	27133	28416	1117
WT	2693	3164	2749	2869	257	30403	26648	26479	27843	2218
t2h30m										
YFP+RFP	2580	2622	2552	2585	35	7273	7699	7954	7642	344
T7RNAP	175220.5	178538.5	182217	178659	3500	3227	2988	3169	3128	125
Dead	2763	2796	2743	2767	27	32082	32146	31741	31990	218
WT	2744	2756	2694	2731	33	33692	30366	29542	31200	2197
t3h30m										
YFP+RFP	2714	2859	2812	2795	74	1864	1877	1910	1884	24
T7RNAP	300200	273700	310220	294707	18870	1073	1033	1032	1046	23
Dead	3004	3028	3089	3040	44	9364	9447	9268	9360	90
WT	3022	2908	2902	2944	68	10104	8565	8276	8982	983
t4h30m										
YFP+RFP	3593	3592	3652	3612	34	8739	9119	9149	9002	229
T7RNAP	549820	530140	536760	538907	10014	5159	5209	4988	5119	116
Dead	3325	3364	3396	3362	36	57640	57838	55442	56973	1330
WT	3488	3049	2911	3149	301	61024	56718	46871	54871	7255
t5h										
YFP+RFP	3838	3990	4016	3948	96	8790	9217	9322	9110	282
T7RNAP	648500	647400	629940	641947	10413	5125	5240	5032	5132	104
Dead	3749	3680	5077	4169	787	61155	61463	60382	61000	557
WT	3869	3396	3083	3449	396	63006	61025	55727	59919	3763

*T7RNAP RFP had to be scaled with another gain