

# **Supplementary Material: Use of Piezoelectric Immunosensors for Detection of Interferon-Gamma Interaction with Specific Antibodies in the Presence of Released-Active Forms of Antibodies to Interferon-Gamma**

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**Table S1.** Studies of the affinity of biolayer coating obtained using various preparation methods for different Abs concentrations.

Parameter	Method 1	Method 2	Method 3	Method 4			Method 5	
				MU + AMT	MU + OMBP	MU + MPT	GA	Calix[4]rene
undiluted Abs to IFNg								
f <sub>i</sub>	9310307	9725769	9487605	9858925	10005262	9985632	9535614	
f (mean, n = 5) ± SD	9309630 ± 192.5	9723476 ± 140400.8	9485924 ± 124989.8	9858307 ± 225.1			9534996 ± 310574	
Δf	676.6	2293.4	1681.2	618.4			617.6	–
M	832.218	2820.882	2067.876	760.632	–	Sensor overloading	759.648	
	155.618	527.482	386.676	142.232			142.048	
N	2	1	3	9			5	–
A	10149	34401	25218	9276			9264	
Abs to IFNg diluted two-fold								
f <sub>i</sub>	9079825	9167912	9238957		9985126	10051563	8771563	
f (mean, n = 5) ± SD	9079217 ± 130567	9166859 ± 311177.5	9238592 ± 412577.2		9985034 ± 23192	10031111 ± 313035	8770837 ± 71454	
Δf	607.8	1053.4	365.4		91.6	20451.6	726.4	
M	747.594	1295.682	449.442	–	112.668	25155.47	893.472	–
H	139.794	242.282	84.042		21.068	4703.868	167.072	
N	6	7	20		5	4	16	
A	9117	15801	5481		1374	306774	10896	
Abs to IFNg diluted four-fold								
f <sub>i</sub>	9228963	9013968	9400487	9850064			8902896	9888215
f (mean, n = 5) ± SD	9228734 ± 45222	9013371 ± 405605	9400239 ± 321144	9849175 ± 156917			8902760 ± 215630	9888118 ± 83486
Δf	228.8	596.8	248	888.6			135.8	97.2
M	281.424	734.064	305.04	1092.978	–	–	167.034	119.556
H	52.624	137.264	57.04	204.378			31.234	22.356
N	12	5	21	21			18	11
A	3432	8952	3720	13329			2037	1458

Annotation for Supplementary Table S1. Δf—oscillation frequency of the sensor following Abs-IFNg binding (Hz); f (mean)—mean oscillation frequency from 5 replicate tests (Hz); f<sub>i</sub>—oscillation frequency of the sensor before contact with IFNg (Hz); m—mass of bioreceptor layer (ng) prepared using methods 1–5; h—bioreceptor layer thickness (nm); N—number of measurement runs where the analytical signal was not decreased by more than 5%; A—concentration sensitivity (A. Hz·mL·ng<sup>-1</sup>) reflecting variations in oscillation frequency of the immunosensor upon contact with IFNg.

**Table S2.** Effects of different chaotropic agents on the number of measurement runs N (MU used for receptor layer coating).

Chaotropic Agent	<i>n</i>
Potassium rhodanide	21
Hydroxylamine hydrochloride	20–21
Urea	8
Phenol	6
Diethylamine hydrochloride	20–21
Magnesium chloride	15
Bidistilled water	–

**Table S3.** Repeatability evaluation of net signal measurements for target samples *vs.* reference solution full data.

Analytical Signal of Sensor	Number of Experiment	Sample <i>vs.</i> IFNg Ratio					
		1:1	1:2	1:4	1:6	2:1	4:1
RAF of Abs to IFNg (liquid samples)							
$\Delta f$	1	252	308	405	441	189	125
	2	248	305	402	425	196	126
	3	241	307	395	439	191	120
	4	260	303	408	436	205	131
	5	252	311	405	452	192	118
	average $\pm \delta$	251 $\pm$ 9	307 $\pm$ 4	403 $\pm$ 6	439 $\pm$ 12	195 $\pm$ 8	124 $\pm$ 6
	s	252	308	405	441	189	125
Placebo (liquid samples)							
$\Delta f$	1	295	363	412	445	223	167
	2	289	358	425	451	225	168
	3	287	367	421	448	218	165
	4	298	364	417	462	219	162
	5	292	359	419	448	214	161
	average $\pm \delta$	292 $\pm$ 6	362 $\pm$ 5	419 $\pm$ 6	451 $\pm$ 8	220 $\pm$ 5	165 $\pm$ 4
	s	4	4	5	7	4	3
RAF of Abs to IFNg (tablets)							
$\Delta f$	1	245	295	389	436	215	112
	2	251	298	385	425	218	109
	3	256	289	392	419	209	118
	4	239	291	378	426	225	121
	5	254	296	396	429	218	108
	average $\pm \delta$	249 $\pm$ 9	294 $\pm$ 5	388 $\pm$ 9	427 $\pm$ 8	217 $\pm$ 7	114 $\pm$ 7
	s	7	4	7	6	6	6
Placebo (tablets)							
$\Delta f$	1	302	401	426	458	230	189
	2	306	412	435	479	235	196
	3	315	413	431	465	231	193
	4	309	405	429	481	227	187
	5	307	408	418	459	209	185
	average $\pm \delta$	308 $\pm$ 6	408 $\pm$ 6	428 $\pm$ 8	468 $\pm$ 14	226 $\pm$ 13	190 $\pm$ 6
	s	5	5	6	11	10	4

Table S3. Cont.

Analytical Signal of Sensor	Number of Experiment	Sample vs. IFNg Ratio					
		1:1	1:2	1:4	1:6	2:1	4:1
RAF of Abs to IFNg (lactose powders)							
$\Delta f$	1	215	286	379	445	178	95
	2	202	276	382	439	165	109
	3	218	282	359	421	159	112
	4	221	286	387	452	176	125
	5	204	274	386	461	156	106
	average $\pm \delta$	$212 \pm 11$	$281 \pm 7$	$379 \pm 14$	$444 \pm 19$	$167 \pm 12$	$109 \pm 13$
	s	9	6	11	15	10	11
Placebo (lactose powders)							
$\Delta f$	1	287	360	402	456	205	142
	2	279	351	425	459	211	153
	3	285	362	409	438	198	149
	4	290	378	387	432	204	143
	5	286	359	401	459	209	148
	average $\pm \delta$	$285 \pm 5$	$362 \pm 12$	$405 \pm 17$	$449 \pm 16$	$205 \pm 6$	$147 \pm 6$
	s	4	10	14	13	5	5

Table S4. Intermediate precision evaluation of net signal measurements for target samples vs. reference solution ( $n = 150$ ,  $p = 0.95$ ) full data.

Day 1.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	152	145	161
	2	154	147	144
	3	145	154	152
	4	149	153	162
	5	141	148	155
	average $\pm \delta$	$148 \pm 7$	$149 \pm 5$	$155 \pm 9$
	s	5	4	7
Placebo (liquid samples)				
$\Delta f$	1	201	198	206
	2	194	215	200
	3	204	214	196
	4	213	196	197
	5	205	208	205
	average $\pm \delta$	$203 \pm 9$	$206 \pm 11$	$201 \pm 6$
	s	7	9	5
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	122	104	102
	2	118	109	108
	3	116	115	111
	4	101	111	115
	5	107	121	104
	average $\pm \delta$	$113 \pm 11$	$112 \pm 8$	$108 \pm 7$
	s	9	6	5

Table S4. Cont.

Day 1.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
Placebo (tablets)				
$\Delta f$	1	169	156	150
	2	174	154	159
	3	181	157	165
	4	170	169	168
	5	180	162	171
	average $\pm \delta$	$175 \pm 7$	$160 \pm 7$	$163 \pm 10$
s	6	6	8	
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	108	114	113
	2	104	106	110
	3	112	104	103
	4	101	109	114
	5	109	111	105
	average $\pm \delta$	$107 \pm 5$	$109 \pm 5$	$109 \pm 6$
s	4	4	5	
Placebo (lactose powders)				
$\Delta f$	1	167	161	163
	2	162	159	167
	3	163	171	170
	4	174	165	164
	5	176	163	160
	average $\pm \delta$	$168 \pm 8$	$164 \pm 6$	$165 \pm 5$
s	6	5	4	
Day 2.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF Abs to IFNg (liquid samples)				
$\Delta f$	1	149	151	157
	2	143	156	159
	3	152	157	163
	4	153	149	167
	5	154	150	155
	average $\pm \delta$	$150 \pm 6$	$153 \pm 5$	$160 \pm 6$
s	4	4	5	
Placebo (liquid samples)				
$\Delta f$	1	203	193	200
	2	207	197	197
	3	198	198	193
	4	205	190	203
	5	206	197	205
	average $\pm \delta$	$204 \pm 4$	$195 \pm 4$	$200 \pm 6$
s	4	3	5	

Table S4. Cont.

Day 2.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	125	109	109
	2	114	115	115
	3	109	123	123
	4	118	117	117
	5	112	120	120
	average $\pm \delta$	$116 \pm 8$	$117 \pm 7$	$117 \pm 7$
s	6	5	5	
Placebo (tablets)				
$\Delta f$	1	172	165	165
	2	176	158	168
	3	184	169	151
	4	165	152	158
	5	178	160	164
	average $\pm \delta$	$175 \pm 9$	$161 \pm 8$	$161 \pm 8$
s	7	7	7	
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	108	110	115
	2	104	115	108
	3	112	108	119
	4	101	107	121
	5	109	114	108
	average $\pm \delta$	$107 \pm 5$	$111 \pm 4$	$114 \pm 8$
s	4	4	6	
Placebo (lactose powders)				
$\Delta f$	1	169	169	156
	2	164	172	152
	3	162	160	165
	4	170	157	161
	5	165	155	154
	average $\pm \delta$	$166 \pm 4$	$163 \pm 9$	$158 \pm 7$
s	3	8	5	
Day 3.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	147	144	143
	2	154	154	145
	3	149	147	152
	4	154	155	150
	5	156	142	143
	average $\pm \delta$	$152 \pm 5$	$148 \pm 7$	$147 \pm 5$
s	4	6	4	

Table S4. Cont.

Day 3.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
Placebo (liquid samples)				
$\Delta f$	1	207	193	204
	2	200	199	201
	3	191	210	191
	4	200	199	206
	5	192	207	197
	average $\pm \delta$	$198 \pm 8$	$202 \pm 8$	$200 \pm 7$
	s	7	7	6
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	121	120	124
	2	117	122	114
	3	109	121	114
	4	115	109	118
	5	114	119	111
	average $\pm \delta$	$115 \pm 5$	$118 \pm 7$	$116 \pm 6$
	s	4	5	5
Placebo (tablets)				
$\Delta f$	1	173	175	171
	2	184	176	183
	3	182	169	183
	4	176	169	176
	5	180	181	176
	average $\pm \delta$	$179 \pm 6$	$174 \pm 6$	$178 \pm 6$
	s	4	5	5
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	118	107	100
	2	103	117	106
	3	105	118	100
	4	119	114	118
	5	109	108	120
	average $\pm \delta$	$111 \pm 9$	$113 \pm 6$	$109 \pm 12$
	s	7	5	10
Placebo (lactose powders)				
$\Delta f$	1	173	155	159
	2	172	169	169
	3	169	170	155
	4	165	168	163
	5	175	157	157
	average $\pm \delta$	$171 \pm 5$	$164 \pm 9$	$161 \pm 7$
	s	4	7	6

Table S4. Cont.

Day 4.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	153	144	144
	2	145	153	152
	3	149	155	157
	4	145	144	146
	5	149	153	145
	average $\pm \delta$	$148 \pm 4$	$150 \pm 7$	$149 \pm 7$
	s	3	5	6
Placebo (liquid samples)				
$\Delta f$	1	201	196	203
	2	200	198	193
	3	202	191	203
	4	196	202	202
	5	194	208	195
	average $\pm \delta$	$199 \pm 4$	$199 \pm 8$	$199 \pm 6$
	s	3	6	5
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	113	109	131
	2	134	107	103
	3	102	131	123
	4	111	109	101
	5	124	111	111
	average $\pm \delta$	$117 \pm 2$	$113 \pm 1$	$114 \pm 2$
	s	12	10	13
Placebo (tablets)				
$\Delta f$	1	168	172	192
	2	166	174	186
	3	190	180	186
	4	175	188	169
	5	181	174	173
	average $\pm \delta$	$176 \pm 1$	$178 \pm 8$	$181 \pm 1$
	s	10	7	10
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	118	115	100
	2	103	111	106
	3	105	112	100
	4	119	112	118
	5	109	115	120
	average $\pm \delta$	$111 \pm 7$	$113 \pm 2$	$109 \pm 1$
	s	14	4	10



Table S4. Cont.

Day 4.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
Placebo (lactose powders)				
$\Delta f$	1	152	175	180
	2	176	167	156
	3	175	157	164
	4	173	171	165
	5	158	176	175
	average $\pm \delta$	$167 \pm 1$	$169 \pm 1$	$168 \pm 1$
	s	11	8	10
Day 5.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	157	143	148
	2	151	153	156
	3	151	153	154
	4	158	150	147
	5	151	149	142
	average $\pm \delta$	$154 \pm 4$	$150 \pm 5$	$149 \pm 7$
	s	4	4	6
Placebo (liquid samples)				
$\Delta f$	1	196	206	190
	2	202	200	195
	3	201	196	202
	4	206	192	207
	5	196	203	209
	average $\pm \delta$	$200 \pm 5$	$199 \pm 7$	$201 \pm 10$
	s	4	6	8
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	118	119	110
	2	109	115	122
	3	113	106	115
	4	104	110	111
	5	120	112	109
	average $\pm \delta$	$113 \pm 8$	$112 \pm 6$	$113 \pm 7$
	s	7	5	5
Placebo (tablets)				
$\Delta f$	1	185	170	177
	2	182	177	179
	3	175	169	183
	4	176	182	174
	5	184	173	169
	average $\pm \delta$	$180 \pm 6$	$174 \pm 7$	$176 \pm 7$
	s	5	5	5

Table S4. Cont.

Day 5.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	103	118	113
	2	107	107	109
	3	111	119	109
	4	117	118	109
	5	112	116	116
	average $\pm \delta$	$110 \pm 7$	$116 \pm 6$	$111 \pm 4$
	s	5	5	3
Placebo (lactose powders)				
$\Delta f$	1	171	176	176
	2	177	173	164
	3	165	165	157
	4	173	166	172
	5	170	162	175
	average $\pm \delta$	$171 \pm 5$	$168 \pm 7$	$169 \pm 10$
	s	4	6	8
Day 6.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	161	145	151
	2	149	147	153
	3	152	162	161
	4	161	162	146
	5	148	161	154
	average $\pm \delta$	$154 \pm 8$	$155 \pm 1$	$153 \pm 7$
	s	6	9	5
Placebo (liquid samples)				
$\Delta f$	1	212	200	193
	2	201	204	206
	3	203	197	204
	4	196	206	198
	5	202	204	205
	average $\pm \delta$	$203 \pm 7$	$202 \pm 5$	$201 \pm 7$
	s	6	4	6
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	118	113	106
	2	111	107	109
	3	121	119	112
	4	115	110	120
	5	110	113	124
	average $\pm \delta$	$115 \pm 6$	$112 \pm 6$	$114 \pm 9$
	s	5	4	8

Table S4. Cont.

Day 6.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
Placebo (tablets)				
$\Delta f$	1	179	184	179
	2	185	177	178
	3	169	179	169
	4	176	178	184
	5	176	170	172
	average $\pm \delta$	$177 \pm 7$	$178 \pm 6$	$176 \pm 7$
	s	6	5	6
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	118	108	104
	2	118	117	122
	3	123	118	104
	4	105	113	121
	5	121	103	116
	average $\pm \delta$	$117 \pm 9$	$112 \pm 8$	$113 \pm 1$
	s	7	6	9
Placebo (lactose powders)				
$\Delta f$	1	175	179	161
	2	169	174	171
	3	172	164	178
	4	168	165	171
	5	177	164	178
	average $\pm \delta$	$172 \pm 5$	$169 \pm 9$	$172 \pm 9$
	s	4	7	7
Day 7.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	166	153	149
	2	168	150	158
	3	158	166	169
	4	152	165	166
	5	152	151	157
	average $\pm \delta$	$159 \pm 9$	$157 \pm 1$	$160 \pm 1$
	s	8	8	8
Placebo (liquid samples)				
$\Delta f$	1	207	201	211
	2	195	204	215
	3	209	201	218
	4	214	199	198
	5	202	198	214
	average $\pm \delta$	$205 \pm 9$	$201 \pm 3$	$211 \pm 1$
	s	7	2	8

Table 4. Cont.

Day 7.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	107	109	114
	2	119	124	124
	3	114	124	105
	4	120	126	119
	5	106	114	121
	average $\pm \delta$	113 $\pm$ 8	119 $\pm$ 9	117 $\pm$ 9
	s	7	7	7
Placebo (tablets)				
$\Delta f$	1	184	169	168
	2	179	167	188
	3	180	165	174
	4	174	165	182
	5	167	188	169
	average $\pm \delta$	177 $\pm$ 8	171 $\pm$ 1	176 $\pm$ 1
	s	7	10	9
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	121	102	117
	2	120	102	103
	3	111	106	102
	4	120	119	106
	5	101	114	110
	average $\pm \delta$	115 $\pm$ 9	109 $\pm$ 8	108 $\pm$ 8
	s	11	9	8
Placebo (lactose powders)				
$\Delta f$	1	178	182	166
	2	166	169	175
	3	180	161	167
	4	169	167	160
	5	173	180	181
	average $\pm \delta$	173 $\pm$ 7	172 $\pm$ 1	170 $\pm$ 1
	s	6	9	8
Day 8.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	172	158	157
	2	157	157	168
	3	171	149	165
	4	166	163	156
	5	158	169	156
	average $\pm \delta$	165 $\pm$ 9	159 $\pm$ 9	160 $\pm$ 7
	s	7	7	6

Table S4. Cont.

Day 8.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
Placebo (liquid samples)				
$\Delta f$	1	201	191	211
	2	195	207	212
	3	203	202	214
	4	202	196	203
	5	208	215	210
	average $\pm \delta$	$202 \pm 6$	$202 \pm 1$	$210 \pm 5$
	s	5	9	4
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	114	123	118
	2	118	115	107
	3	122	118	113
	4	123	113	104
	5	110	106	124
	average $\pm \delta$	$117 \pm 7$	$115 \pm 8$	$113 \pm 1$
	s	5	6	8
Placebo (tablets)				
$\Delta f$	1	181	173	180
	2	169	179	174
	3	171	178	176
	4	172	169	182
	5	176	176	178
	average $\pm \delta$	$174 \pm 6$	$175 \pm 5$	$178 \pm 4$
	s	5	4	3
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	106	104	107
	2	116	116	105
	3	101	118	119
	4	103	102	103
	5	120	116	112
	average $\pm \delta$	$109 \pm 1$	$111 \pm 9$	$109 \pm 8$
	s	8	8	6
Placebo (lactose powders)				
$\Delta f$	1	173	178	171
	2	179	177	164
	3	175	180	180
	4	166	179	170
	5	163	178	174
	average $\pm \delta$	$171 \pm 8$	$178 \pm 1$	$172 \pm 7$
	s	7	1	6

Table S4. Cont.

Day 9.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	167	153	173
	2	170	154	153
	3	158	175	161
	4	165	166	152
	5	160	166	154
	average $\pm \delta$	$164 \pm 6$	$163 \pm 11$	$159 \pm 11$
	s	5	9	9
Placebo (liquid samples)				
$\Delta f$	1	190	199	200
	2	203	207	192
	3	203	188	193
	4	205	199	210
	5	209	194	193
	average $\pm \delta$	$202 \pm 9$	$197 \pm 9$	$198 \pm 9$
	s	7	7	8
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	124	121	129
	2	111	124	121
	3	116	124	115
	4	114	115	129
	5	107	121	108
	average $\pm \delta$	$114 \pm 8$	$121 \pm 5$	$120 \pm 1$
	s	6	4	9
Placebo (tablets)				
$\Delta f$	1	163	170	171
	2	171	180	176
	3	173	162	179
	4	174	174	182
	5	182	162	178
	average $\pm \delta$	$173 \pm 8$	$170 \pm 1$	$177 \pm 5$
	s	7	8	4
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	104	109	113
	2	119	123	106
	3	111	113	127
	4	114	125	107
	5	122	107	115
	average $\pm \delta$	$114 \pm 9$	$115 \pm 1$	$114 \pm 1$
	s	7	8	8

Table S4. Cont.

Day 9.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
Placebo (lactose powders)				
$\Delta f$	1	172	172	175
	2	179	166	170
	3	186	170	165
	4	186	186	185
	5	172	179	165
	average $\pm \delta$	$179 \pm 9$	$175 \pm 1$	$172 \pm 1$
	s	7	8	8
Day 10.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (liquid samples)				
$\Delta f$	1	158	165	160
	2	172	160	163
	3	162	166	155
	4	166	173	161
	5	160	160	164
	average $\pm \delta$	$164 \pm 7$	$165 \pm 7$	$161 \pm 4$
	s	6	5	4
Placebo (liquid samples)				
$\Delta f$	1	204	210	195
	2	189	207	200
	3	195	212	196
	4	202	197	209
	5	208	199	197
	average $\pm \delta$	$200 \pm 9$	$205 \pm 8$	$199 \pm 7$
	s	8	7	6
RAF of Abs to IFNg (tablets)				
$\Delta f$	1	115	129	107
	2	115	113	130
	3	124	108	109
	4	112	126	111
	5	111	120	114
	average $\pm \delta$	$115 \pm 6$	$119 \pm 1$	$114 \pm 1$
	s	5	9	9
Placebo (tablets)				
$\Delta f$	1	167	182	168
	2	169	183	187
	3	187	166	166
	4	171	167	181
	5	166	171	182
	average $\pm \delta$	$172 \pm 1$	$174 \pm 1$	$177 \pm 1$
	s	9	8	9

Table S4. Cont.

Day 10.				
Analytical Signal of Sensor	Number of Experiment	Operator 1	Operator 2	Operator 3
RAF of Abs to IFNg (lactose powders)				
$\Delta f$	1	120	110	111
	2	117	116	119
	3	102	103	122
	4	113	102	116
	5	112	115	115
	average $\pm \delta$	$113 \pm 8$	$109 \pm 8$	$117 \pm 5$
	s	7	7	4
Placebo (lactose powders)				
$\Delta f$	1	167	177	169
	2	164	171	166
	3	183	171	176
	4	186	181	186
	5	175	178	168
	average $\pm \delta$	$175 \pm 12$	$176 \pm 6$	$173 \pm 1$
	s	10	4	8