

Development of a versatile biotinylated material based on SU-8

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Supporting Material

Figure S1. Scanned images obtained from chips with GAR-Au and streptavidin-Au microarrays in chips depending on UV irradiation on photobiotin coating

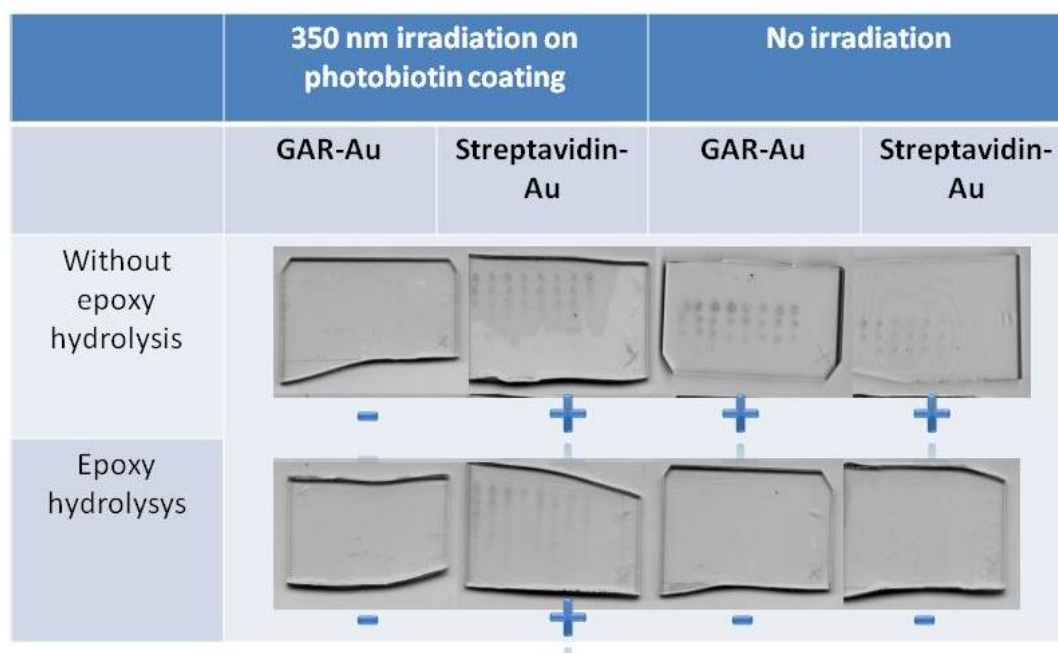


Table S1. Quantitative data of the immunoassay designed to evaluate the bioavailability of the biotin immobilized on the biotinylated SU-8 (see figure 3)

Concentration ($\mu\text{g/mL}$)	Net signal				S/B ratio ^[a]				CV (%)			
	a-BSA		a-biotin		a-BSA		a-biotin		a-BSA		a-biotin	
	A	B	A	B	A	B	A	B	A	B	A	B
10	11495.3	2777.7	13788	14825	1.24	0.31	1.42	1.47	0.04	0.40	0.07	0.08
5	10307.3	372.3	10857	15138.3	1.24	0.03	1.23	1.30	0.07	1.33	0.13	0.08
1	6355.3	1314.3	8657	9064	0.78	0.12	1.29	0.80	0.12	0.85	0.10	0.05

[a] Net signal/background ratio.

Table S2. Quantitative data obtained for the immunoassay using a-BSA and a-biotin microarrays on SU-8/photobiotin 1/1 (v/v) chip (see figure 5).

Concentration ($\mu\text{g/mL}$)	Net signal		S/B ratio ^[a]		CV (%)	
	a-BSA	a-biotin	a-BSA	a-biotin	a-BSA	a-biotin
10	2928.3	20434.7	0.25	3.13	0.42	0.06
5	2414.7	13069.3	0.42	2.39	0.34	0.15
1	1274.0	5140.7	0.25	0.99	0.39	0.21

[a] Net signal/background ratio.

Table S3 Comparison between SU-8/photobiotin mixed chips fabricated with different volume ratio.

a-biotin ($\mu\text{g/mL}$)	SU-8/photobiotin 2/1 (v/v)			SU-8/photobiotin 1/1 (v/v)			SU-8/photobiotin 1/4 (v/v)			SU-8/photobiotin 1/10 (v/v)		
	Net signal	S/B ratio ^[a]	S/B SD ^[b]	Net signal	S/B ratio ^[a]	S/B SD ^[b]	Net signal	S/B ratio ^[a]	S/B SD ^[b]	Net signal	S/B ratio ^[a]	S/B SD ^[b]
10	19607	2.42	0.09	19780	3.36	0.31	17677	2.14	0.11	13672	1.08	0.17
5	15950	1.97	0.09	12702	2.16	0.22	16676	2.02	0.13	7207	0.55	0.19
1	7596	0.94	0.10	4498	0.76	0.13	6233	0.76	0.05	2507	0.26	0.04

[a] Net signal/background ratio. [b] Net signal/background standard deviation.

Calculation of LOD:

The LOD was estimated at 0.26 ng/mL of gestrinone. according to the expression $\text{LOD} = V_{\text{max}} - 2t_{\text{smax}}$, where V_{max} is the net signal mean when the gestrinone concentration is 0; t corresponds to the t-Student value at 95% for determined replications; and s_{max} is the blank standard deviation.