

Supplementary Information

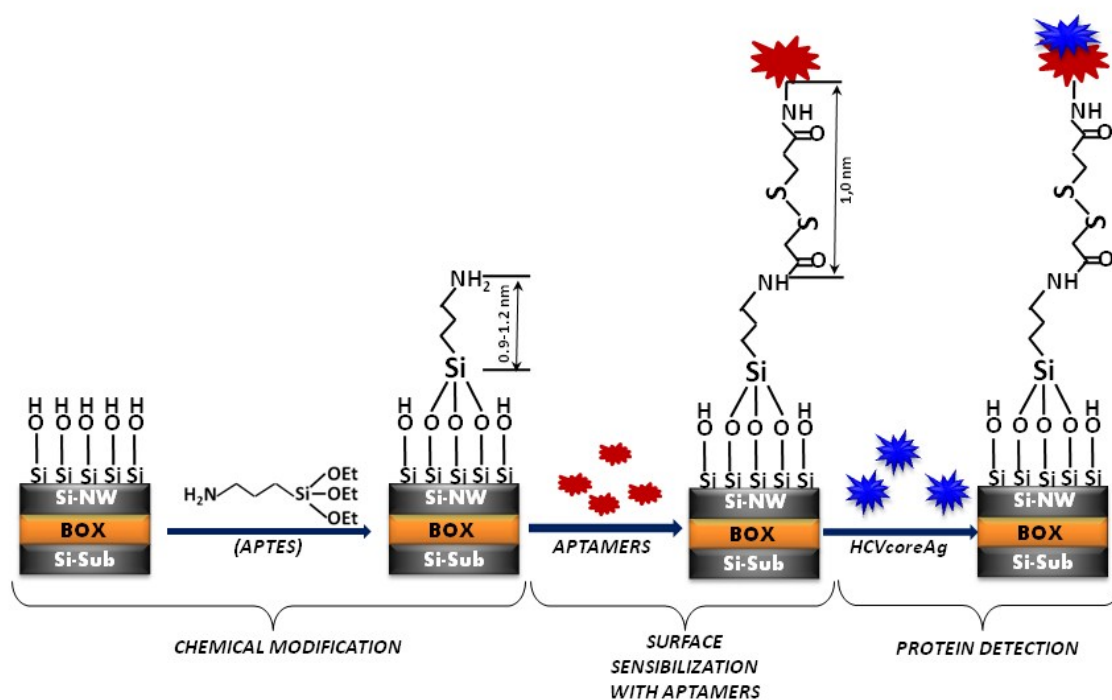


Figure S1. Scheme of HCVcoreAg detection with a NW biosensor.

Table 1. Mass spectrometric characteristics of the reference spectrum, obtained for the solution of commercially available HCVcoreAg preparation (of 10^{-7} M concentration).

m/z	S/N*	Resolution	Intensity	Area
791.991	2.5	2402	17280	6530
823.075	2.1	2399	12877	5946
854.712	13.6	3406	61326.13	31363
861.070	8	3303	35606.12	19337
870.727	8.1	4361	36211.61	13893
876.756	3.5	4534	22499	5920
927.282	2.4	3678	14935.5	4020
973.572	4.6	4161	28328.5	7805
1013.422	2	3809	12135.5	3472
1033.449	2.2	4141	13420	3392
1053.591	2.4	3401	13757	4480
1118.531	3.7	4355	20263.88	5701
1157.634	2.1	4423	11303.5	3302
1201.7	2.8	4487	14387.5	4323
1234.739	7.6	3618	22612.64	19082
1263.781	8.9	4457	25476.41	17586
1277.821	22.2	4788	62081.23	39950
1385.841	2.1	4817	8551.5	3161
1434.906	6.8	5184	15580.41	11606
1493.888	8.8	5106	19194.05	15857
1584.887	2	4653	6265	2089
1657.917	10.7	5327	20222.57	19670
1707.858	36.4	5150	66864.33	71798
1716.96	14.7	5126	26737.92	28382
1791.794	7.9	3402	12197.35	23294
2156.728	6.4	5099	7469.19	11536
2224.697	13.1	5249	14711.71	22760
2233.265	4.4	6000	8604.5	3870
2298.649	5.3	5778	9938.5	4754
2300.629	9	6081	16771	7909
2366.622	30.1	4792	29688.9	55389
2383.303	34.4	5042	34529.29	59426
2509.267	2.3	5491	3757.5	1815
2663.043	2.3	5993	3514.75	1965
2703.858	20.1	4699	15866.13	34704
2715.747	25.4	4864	19340.24	43585
2806.735	11.2	6296	15731.25	9235
2870.65	6.8	4386	4435.95	12593

*The reference spectrum contains peaks, whose signal-to-noise ratio (S/N) is no less than 2; contaminant peaks corresponding to trypsin autolysis and possible contaminants of protein nature (keratin proteins P35908 and P02533), are excluded. The peaks were identified with Mascot

proteomic search engine (<http://www.matrixscience.com>), as described in «Materials and Methods» section (see the main text of the manuscript).

Table 2. Interpretation of MALDI mass spectrum obtained for the measuring cell of the NW biosensor, incubated in 10^{-15} M HCVcoreAg solution without the use of a microwave generator.

m/z	S/N	Resolution	Intensity	Area	Protein name (UniProt AC)
822.992	65.5	4826	140090.5	45332	HCVcoreAg*
838.494	16.2	5067	34260.21	11192	n/d
842.516	12.9	5061	26951.24	8472	Trypsin
860.931	11.7	4545	24468.71	9386	HCVcoreAg
880.764	11.5	5117	23597.04	8387	n/d
941.345	3.5	4939	9715.5	3332	n/d
973.504	2.2	3104	5957.75	1750	HCVcoreAg
1015.462	2.6	5308	6648.25	1924	n/d
1033.524	34.6	4627	62817.84	31224	HCVcoreAg
1049.915	15.6	4988	27637.11	13223	n/d
1118.413	2.3	3767	5107	1556	HCVcoreAg
1179.581	9.2	6177	13053.62	5733	Keratin
1234.72	2.7	5343	4952.81	1163	HCVcoreAg
1277.778	11	6436	13680.71	6683	HCVcoreAg
1320.586	6.5	5737	7612.35	4645	Keratin (P35908)
1364.761	6.4	5853	7166.58	4586	Keratin (P35908)
1434.919	3.9	7453	5364.25	1291	HCVcoreAg
1475.924	20.4	6808	19740.69	11981	Keratin (P35908)
1492.91	4.4	5926	5493.63	1584	Keratin (P35908)
1657.956	4	7220	4360.5	1150	HCVcoreAg
1707.913	20.8	7236	16878.96	12785	HCVcoreAg
1716.992	8.2	7455	6671.48	4900	HCVcoreAg
1791.877	3.2	7587	3053.5	999	HCVcoreAg
1838.985	11.1	7557	8323.52	6889	Keratin (P35908)
1993.886	50.3	7979	33009.54	28841	Keratin
2156.729	3	8353	2483.13	825	HCVcoreAg
2211.104	27.9	7436	15014.66	16100	Trypsin
2224.666	8.3	7476	4410.07	4817	HCVcoreAg
2233.209	8.3	7369	4390.36	5071	HCVcoreAg
2283.275	8.5	5050	4089.82	7194	Trypsin
2298.561	7.6	7272	3811.39	4421	HCVcoreAg
2366.527	21.4	7039	10180.08	12980	HCVcoreAg
2383.292	16.7	7082	7868.2	9990	HCVcoreAg
2398.246	13.1	6286	6015.9	8732	n/d
2703.674	10	6491	3794.62	6312	HCVcoreAg
2715.672	12.5	6422	4701.51	7966	HCVcoreAg
2805.411	9.8	7010	3535.34	5671	n/d
2870.573	7.4	6260	2537.74	4878	HCVcoreAg

*– mass spectrometric signal, which corresponds to the reference spectrum

Table 3. Interpretation of MALDI mass spectrum obtained for the measuring cell of the NW biosensor, incubated in 10^{-17} M HCVcoreAg solution with use of a microwave generator.

m/z	S/N	Resolution	Intensity	Area	Protein name (UniProt AC)
823.08	59.7	3121	162119.6	82513	HCVcoreAg
839.051	11.7	2821	31163.61	18920	n/d
842.507	7.6	2783	20237.43	11701	Trypsin
861.062	4.3	3851	14357	4460	HCVcoreAg
973.537	4	3561	12333.75	3424	HCVcoreAg
999.477	13.3	3651	31830.83	17672	n/d
1022.6	4.2	2900	12522	4987	n/d
1033.574	23.9	3050	55635.11	42689	HCVcoreAg
1036.528	30.9	2189	72030.98	65435	Keratin (P02533)
1050.077	5.7	4207	16300.5	5439	n/d
1107.548	10.8	4017	22723.09	13544	Keratin (P35908)
1122.677	7.3	3751	15026.48	10162	Keratin (P35908)
1165.586	17.1	4165	32742.4	20634	Keratin
1179.598	19.6	3922	36813.08	25195	Keratin
1201.611	3.6	4269	8291.25	2600	HCVcoreAg
1263.692	22.4	3975	38181.58	28579	HCVcoreAg
1277.806	42.2	4187	71027.33	51266	HCVcoreAg
1364.64	8.5	3742	12958.46	12541	Keratin (P35908)
1379.715	8.3	4405	12340.44	9822	Keratin (P02533)
1407.697	9.1	4351	13249.33	11208	n/d
1434.895	2.1	5186	3541.63	1175	HCVcoreAg
1475.739	31.2	4396	42468.34	38417	Keratin (P35908)
1657.988	7.7	4216	8920.81	10600	HCVcoreAg
1699.816	5.2	5089	6713.31	2531	n/d
1707.856	7.1	4220	7896.59	10377	HCVcoreAg
1716.956	9.4	4539	10504.62	12321	HCVcoreAg
1873.922	15.8	4254	14789.37	22959	n/d
1890.956	43.2	4547	40601.99	57285	Keratin (P35908)
1993.976	109	4625	90487.14	133213	Keratin
2055.179	11	4009	8423.88	14617	Keratin (P02533)
2064.182	23.1	4489	17440.29	28051	n/d
2211.104	3.9	4803	8019.88	1970	Trypsin
2350.263	8.4	3906	4628.91	9756	n/d
2366.681	6.2	3518	3032	7972	HCVcoreAg
2383.233	21.8	4383	11935.95	22262	HCVcoreAg
2705.463	10.5	4190	4182.84	9793	n/d
2717.425	6.3	4191	2429.45	5925	n/d