

Table S1. The results of the detection of diphtheria toxin (DT) by sandwich ELISA in corynebacterial cultures.

Nr.	GCLoD collection Nr.	Species	tox gene (by PCR)	Toxin production (by Elek test)	ELISA results	
					Qualitative	Determined toxin concentration, ng/mL
1	NCTC 3984	<i>C. diphtheriae</i>	Pos	Pos	Pos	878.4
2	NCTC 10648	<i>C. diphtheriae</i>	Pos	Pos	Pos	3370.0
3	KL 280	<i>C. diphtheriae</i>	Pos	Pos	Pos	1865.7
4	KL 339	<i>C. diphtheriae</i>	Pos	Pos	Pos	1405.6
5	KL 363	<i>C. diphtheriae</i>	Pos	Pos	Pos	858.2
6	KL 364	<i>C. diphtheriae</i>	Pos	Pos	Pos	2574.0
7	KL 390	<i>C. diphtheriae</i>	Pos	Pos	Pos	1057.1
8	KL 532	<i>C. diphtheriae</i>	Pos	Pos	Pos	794.7
9	KL 565	<i>C. diphtheriae</i>	Pos	Pos	Pos	762.2
10	KL 603	<i>C. diphtheriae</i>	Pos	Pos	Pos	1043.0
11	KL 613	<i>C. diphtheriae</i>	Pos	Pos	Pos	1096.3
12	KL 623	<i>C. diphtheriae</i>	Pos	Pos	Pos	619.2
13	KL 625	<i>C. diphtheriae</i>	Pos	Pos	Pos	581.5
14	KL 631	<i>C. diphtheriae</i>	Pos	Pos	Pos	776.4
15	KL 633	<i>C. diphtheriae</i>	Pos	Pos	Pos	719.1
16	KL 638	<i>C. diphtheriae</i>	Pos	Pos	Pos	299.1
17	KL 652	<i>C. diphtheriae</i>	Pos	Pos	Pos	271.6
18	KL 654	<i>C. diphtheriae</i>	Pos	Pos	Pos	288.5
19	KL 663	<i>C. diphtheriae</i>	Pos	Pos	Pos	221.9
20	KL 670	<i>C. diphtheriae</i>	Pos	Pos	Pos	56.4
21	KL 682	<i>C. diphtheriae</i>	Pos	Pos	Pos	55.4
22	KL 697	<i>C. diphtheriae</i>	Pos	Pos	Pos	402.0
23	KL 839	<i>C. diphtheriae</i>	Pos	Pos	Pos	481.8
24	KL 857	<i>C. diphtheriae</i>	Pos	Pos	Pos	336.5
25	KL 950	<i>C. diphtheriae</i>	Pos	Pos	Pos	417.8
26	KL 956	<i>C. diphtheriae</i>	Pos	Pos	Pos	633.9
27	KL 1059	<i>C. diphtheriae</i>	Pos	Pos	Pos	1301.4
28	KL 1303	<i>C. diphtheriae</i>	Pos	Pos	Pos	843.0
29	KL 1438	<i>C. diphtheriae</i>	Pos	Pos	Pos	248.7
30	KL 1648	<i>C. diphtheriae</i>	Pos	Pos	Pos	742.3
31	KL 1670	<i>C. diphtheriae</i>	Pos	Pos	Pos	769.6
32	KL 1675	<i>C. diphtheriae</i>	Pos	Pos	Pos	902.2
33	KL 1686	<i>C. diphtheriae</i>	Pos	Pos	Pos	633.9
34	KL 1692	<i>C. diphtheriae</i>	Pos	Pos	Pos	788.4
35	KL 1693	<i>C. diphtheriae</i>	Pos	Pos	Pos	1066.1
36	KL 1695	<i>C. diphtheriae</i>	Pos	Pos	Pos	1150.1
37	KL 1701	<i>C. diphtheriae</i>	Pos	Pos	Pos	1251.0
38	KL 1704	<i>C. diphtheriae</i>	Pos	Pos	Pos	1325.7
39	KL 1707	<i>C. diphtheriae</i>	Pos	Pos	Pos	1040.1

40	KL 1747	<i>C. diphtheriae</i>	Pos	Pos	Pos	1139.5
41	KL 1754	<i>C. diphtheriae</i>	Pos	Pos	Pos	1189.5
42	KL 1755	<i>C. diphtheriae</i>	Pos	Pos	Pos	1255.2
43	KL 1961	<i>C. diphtheriae</i>	Pos	Pos	Pos	931.0
44	KL 215	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
45	KL 240	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
46	KL 286	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
47	KL 299	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
48	KL 370	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
49	KL 356	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
50	KL 355	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
51	KL 358	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
52	KL 377	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
53	KL 402	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
54	KL 434	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
55	KL 461	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
56	KL 476	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
57	KL 478	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
58	KL 479	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
59	KL 507	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
60	KL 517	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
61	KL 557	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
62	KL 588	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
63	KL 594	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
64	KL 596	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
65	KL 637	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
66	KL 762	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
67	KL 765	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
68	KL 809	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
69	KL 816	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
70	KL 828	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
71	KL 888	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
72	KL 895	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
73	KL 920	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
74	KL 936	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
75	KL 940	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
76	KL 948	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
77	KL 961	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
78	KL 964	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
79	KL 965	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
80	KL 969	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
81	KL 985	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
82	KL 1058	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
83	KL 1284	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
84	KL 1296	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
85	KL 1305	<i>C. diphtheriae</i>	Neg	n/d	Neg	0

86	KL 1306	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
87	KL 1312	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
88	KL 1333	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
89	KL 1336	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
90	KL 1349	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
91	KL 1351	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
92	KL 1352	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
93	KL 1355	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
94	KL 1364	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
95	KL 1424	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
96	KL 1748	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
97	KL 1749	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
98	KL 1807	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
99	KL 1812	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
100	KL 1840	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
101	KL 1841	<i>C. diphtheriae</i>	Neg	n/d	Neg	0
102	KL 179	<i>C. diphtheriae</i> (NTTB)	Pos	Neg	Neg	0
103	KL 1810	<i>C. diphtheriae</i> (NTTB)	Pos	Neg	Neg	0
104	KL 1854	<i>C. diphtheriae</i> (NTTB)	Pos	Neg	Neg	0
105	KL 182	<i>C. silvaticum</i> (NTTB)	Pos	Neg	Neg	0
106	KL 1848	<i>C. silvaticum</i> (NTTB)	Pos	Neg	Neg	0
107	M06-759	<i>C. ulcerans</i>	Pos	Pos	Pos	2514.8
108	KL107	<i>C. ulcerans</i>	Pos	Pos	Pos	71.3
109	KL 109	<i>C. ulcerans</i>	Pos	Pos	Pos	364.3
110	KL 110	<i>C. ulcerans</i>	Pos	Pos	Pos	402.8
111	KL 126	<i>C. ulcerans</i>	Pos	Pos	Pos	414.4
112	KL 188	<i>C. ulcerans</i>	Pos	Pos	Pos	70.9
113	KL 190	<i>C. ulcerans</i>	Pos	Pos	Pos	138.5
114	KL 200	<i>C. ulcerans</i>	Pos	Pos	Pos	58.9
115	KL 203	<i>C. ulcerans</i>	Pos	Pos	Pos	33.6
116	KL 239	<i>C. ulcerans</i>	Pos	Pos	Pos	71.2
117	KL 241	<i>C. ulcerans</i>	Pos	Pos	Pos	162.5
118	KL 242	<i>C. ulcerans</i>	Pos	Pos	Pos	59.8
119	KL 246	<i>C. ulcerans</i>	Pos	Pos	Pos	137.7
120	KL 249	<i>C. ulcerans</i>	Pos	Pos	Pos	53.7
121	KL 251	<i>C. ulcerans</i>	Pos	Pos	Pos	87.7
122	KL 255	<i>C. ulcerans</i>	Pos	Pos	Pos	73.6
123	KL 261	<i>C. ulcerans</i>	Pos	Pos	Pos	68.5
124	KL 272	<i>C. ulcerans</i>	Pos	Pos	Pos	70.5
125	KL 296	<i>C. ulcerans</i>	Pos	Pos	Pos	83.7
126	KL 297	<i>C. ulcerans</i>	Pos	Pos	Pos	19.2
127	KL 301	<i>C. ulcerans</i>	Pos	Pos	Pos	75.6
128	KL 315	<i>C. ulcerans</i>	Pos	Pos	Pos	135.3
129	KL 318	<i>C. ulcerans</i>	Pos	Pos	Pos	186.6
130	KL 320	<i>C. ulcerans</i>	Pos	Pos	Pos	87.5
131	KL 332	<i>C. ulcerans</i>	Pos	Pos	Pos	114.4

132	KL 337	<i>C. ulcerans</i>	Pos	Pos	Pos	70.9
133	KL 345	<i>C. ulcerans</i>	Pos	Pos	Pos	6.0
134	KL 367	<i>C. ulcerans</i>	Pos	Pos	Pos	22.7
135	KL 380	<i>C. ulcerans</i>	Pos	Pos	Pos	26.9
136	KL 381	<i>C. ulcerans</i>	Pos	Pos	Pos	17.7
137	KL 387	<i>C. ulcerans</i>	Pos	Pos	Pos	26.3
138	KL 392	<i>C. ulcerans</i>	Pos	Pos	Pos	20.0
139	KL 433	<i>C. ulcerans</i>	Pos	Pos	Pos	28.6
140	KL 475	<i>C. ulcerans</i>	Pos	Pos	Pos	20.5
141	KL 483	<i>C. ulcerans</i>	Pos	Pos	Pos	27.6
142	KL 492	<i>C. ulcerans</i>	Pos	Pos	Pos	10.0
143	KL 497	<i>C. ulcerans</i>	Pos	Pos	Pos	9.2
144	KL 501	<i>C. ulcerans</i>	Pos	Pos	Pos	15.0
145	KL 515	<i>C. ulcerans</i>	Pos	Pos	Pos	2.8
146	KL 540	<i>C. ulcerans</i>	Pos	Pos	Pos	14.4
147	KL 541	<i>C. ulcerans</i>	Pos	Pos	Pos	18.0
148	KL 547	<i>C. ulcerans</i>	Pos	Pos	Pos	3.4
149	KL 556	<i>C. ulcerans</i>	Pos	Pos	Pos	13.9
150	KL 568	<i>C. ulcerans</i>	Pos	Pos	Pos	11.7
151	KL 1294	<i>C. ulcerans</i>	Pos	Pos	Pos	44.6
152	KL 1357	<i>C. ulcerans</i>	Pos	Pos	Pos	87.0
153	KL 1370	<i>C. ulcerans</i>	Pos	Pos	Pos	23.4
154	KL 1750	<i>C. ulcerans</i>	Pos	Pos	Pos	167.2
155	KL 1779	<i>C. ulcerans</i>	Pos	Pos	Pos	103.0
156	KL 1809	<i>C. ulcerans</i>	Pos	Pos	Pos	90.0
157	KL 1819	<i>C. ulcerans</i>	Pos	Pos	Pos	182.0
158	KL 1825	<i>C. ulcerans</i>	Pos	Pos	Pos	14.4
159	KL 1832	<i>C. ulcerans</i>	Pos	Pos	Pos	200.0
160	KL 1853	<i>C. ulcerans</i>	Pos	Pos	Pos	181.0
161	KL 1972	<i>C. ulcerans</i>	Pos	Pos	Pos	91.0
162	KL 1902	<i>C. ulcerans</i>	Pos	Pos	Neg	0
163	KL 199	<i>C. ulcerans</i>	Neg	n/d	Neg	0
164	KL 244	<i>C. ulcerans</i>	Neg	n/d	Neg	0
165	KL 274	<i>C. ulcerans</i>	Neg	n/d	Neg	0
166	KL 275	<i>C. ulcerans</i>	Neg	n/d	Neg	0
167	KL 349	<i>C. ulcerans</i>	Neg	n/d	Neg	0
168	KL 366	<i>C. ulcerans</i>	Neg	n/d	Neg	0
169	KL 451	<i>C. ulcerans</i>	Neg	n/d	Neg	0
170	KL 456a	<i>C. ulcerans</i>	Neg	n/d	Neg	0
171	KL 490	<i>C. ulcerans</i>	Neg	n/d	Neg	0
172	KL 841	<i>C. ulcerans</i>	Neg	n/d	Neg	0
173	KL 853	<i>C. ulcerans</i>	Neg	n/d	Neg	0
174	KL 862	<i>C. ulcerans</i>	Neg	n/d	Neg	0
175	KL 876	<i>C. ulcerans</i>	Neg	n/d	Neg	0
176	KL 941	<i>C. ulcerans</i>	Neg	n/d	Neg	0
177	KL 1017	<i>C. ulcerans</i>	Neg	n/d	Neg	0

178	KL 1021	<i>C. ulcerans</i>	Neg	n/d	Neg	0
179	KL 1295	<i>C. ulcerans</i>	Neg	n/d	Neg	0
180	KL 1321	<i>C. ulcerans</i>	Neg	n/d	Neg	0
181	KL 1335	<i>C. ulcerans</i>	Neg	n/d	Neg	0
182	KL 1340	<i>C. ulcerans</i>	Neg	n/d	Neg	0
183	KL 1361	<i>C. ulcerans</i>	Neg	n/d	Neg	0
184	KL 1447	<i>C. ulcerans</i>	Neg	n/d	Neg	0
185	KL 1455	<i>C. ulcerans</i>	Neg	n/d	Neg	0
186	KL 1465	<i>C. ulcerans</i>	Neg	n/d	Neg	0
187	KL 1466	<i>C. ulcerans</i>	Neg	n/d	Neg	0
188	KL 1474	<i>C. ulcerans</i>	Neg	n/d	Neg	0
189	KL 1540	<i>C. ulcerans</i>	Neg	n/d	Neg	0
190	KL 1563	<i>C. ulcerans</i>	Neg	n/d	Neg	0
191	KL 1574	<i>C. ulcerans</i>	Neg	n/d	Neg	0
192	KL 1578	<i>C. ulcerans</i>	Neg	n/d	Neg	0
193	KL 1583	<i>C. ulcerans</i>	Neg	n/d	Neg	0
194	KL 1596	<i>C. ulcerans</i>	Neg	n/d	Neg	0
195	KL 1622	<i>C. ulcerans</i>	Neg	n/d	Neg	0
196	KL 1649	<i>C. ulcerans</i>	Neg	n/d	Neg	0
197	KL 1664	<i>C. ulcerans</i>	Neg	n/d	Neg	0
198	KL 1665	<i>C. ulcerans</i>	Neg	n/d	Neg	0
199	KL 1694	<i>C. ulcerans</i>	Neg	n/d	Neg	0
200	KL 1743	<i>C. ulcerans</i>	Neg	n/d	Neg	0
201	KL 1802	<i>C. ulcerans</i>	Neg	n/d	Neg	0
202	KL 1808	<i>C. ulcerans</i>	Neg	n/d	Neg	0
203	KL 1971	<i>C. ulcerans</i>	Neg	n/d	Neg	0
204	HB 457	<i>C. pseudotuberculosis</i>	Neg	Neg	Neg	0
205	DSM 7180	<i>C. pseudotuberculosis</i>	Neg	Neg	Neg	0
206	DSM 20689	<i>C. pseudotuberculosis</i>	Neg	Neg	Neg	0
207	KL 1634	<i>C. pseudotuberculosis</i>	Neg	Neg	Neg	0
208	KL 1635	<i>C. pseudotuberculosis</i>	Neg	Neg	Neg	0
209	KL 128	<i>C. accolens</i>	Neg	n/d	Neg	0
210	KL 129	<i>C. accolens</i>	Neg	n/d	Neg	0
211	KL 1452	<i>C. pseudodiphtheriticum</i>	Neg	n/d	Neg	0
212	KL 1522	<i>C. amycolatum</i>	Neg	n/d	Neg	0
213	KL 1536	<i>C. striatum</i>	Neg	n/d	Neg	0
214	KL1566	<i>C. amycolatum</i>	Neg	n/d	Neg	0
215	KL 1680	<i>C. amycolatum</i>	Neg	n/d	Neg	0
216	KL 1684	<i>C. amycolatum</i>	Neg	n/d	Neg	0
217	KL 1711	<i>C. amycolatum</i>	Neg	n/d	Neg	0
218	KL 1715	<i>C. tuberculostearicum</i>	Neg	n/d	Neg	0

Neg – negative; Pos – positive; NTTB – non-toxigenic *tox*-negative. Highlighted in bold - strain KL 1902 with “unusual” properties. Note - in the absence of the *tox* gene, DT in most cases was not determined (n/d).

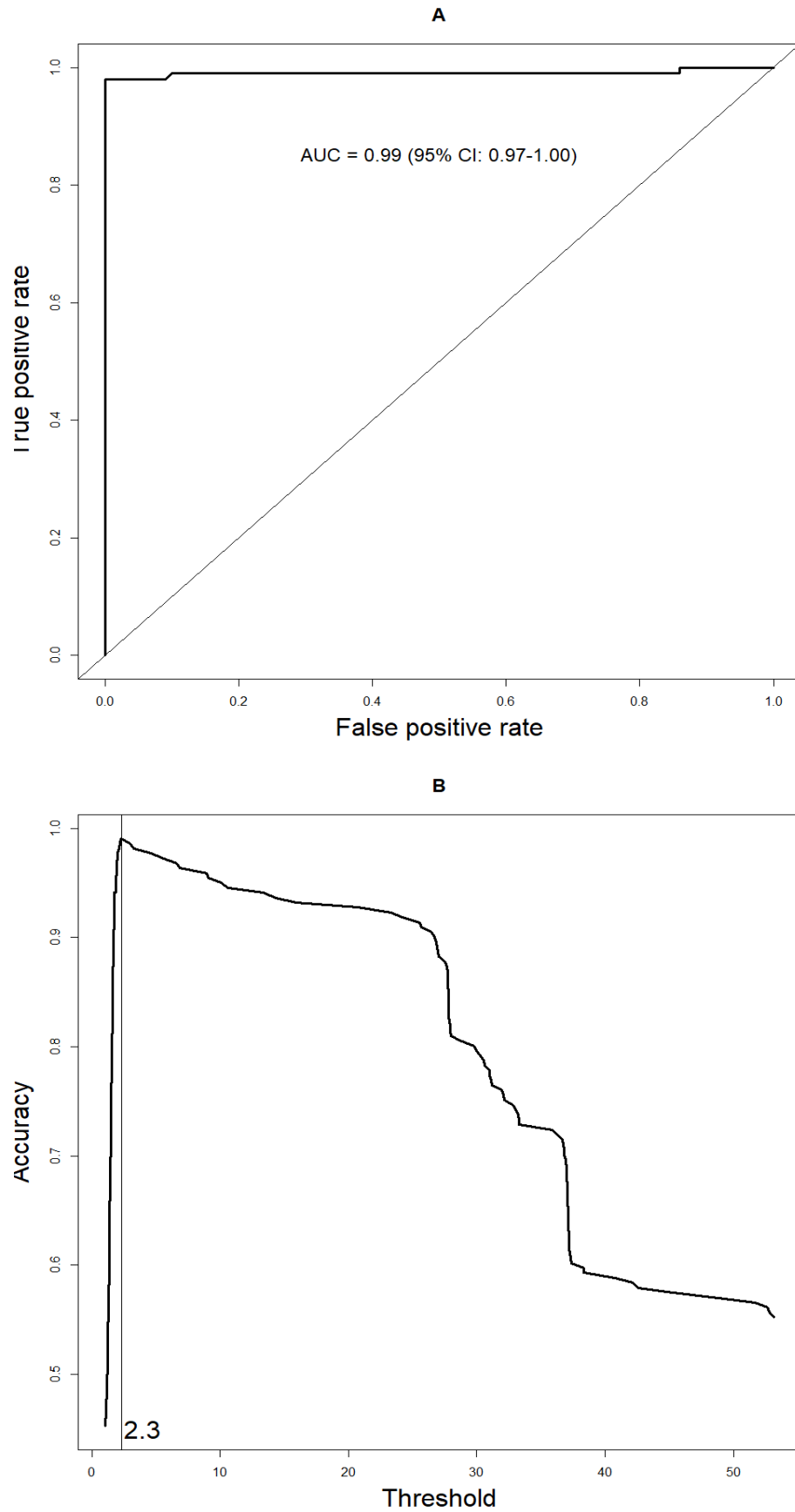


Figure S1. ROC-curve (A) and threshold-accuracy dependence curve (B) obtained as results of ROC analysis of ELISA results. AUC, 95% CI for AUC, as well as the signal/background ratio threshold at maximal accuracy are showed. CI – confidence interval.