

# Additional File 2

## Table T4 - List of predicted gene interactions in *S. cerevisiae* obtained from a transcription factor knockout dataset

The table shows a sorted list of the 300 most confident edges obtained by applying PG<sup>new</sup> and LTR<sup>u,u</sup> to the dataset published by Reimand et al. in <http://www.ebi.ac.uk/arrayexpress/experiments/E-MTAB-109>. Each predicted edge is compared against the four silver standards **SS**<sub>1</sub>-**SS**<sub>4</sub> (see main text).

The values in the silver standard columns are:

- 1**: if the predicted edge is contained in the silver standard;
- 0**: if the predicted edge is not contained in the silver standard;
- x**: if the predicted edge contains a node not contained in the silver standard.

Ranking	Transcription factor	Target gene	SS <sub>1</sub>	SS <sub>2</sub>	SS <sub>3</sub>	SS <sub>4</sub>
1	YML051W	YBR018C	1	1	x	0
2	YML051W	YBR020W	1	0	x	1
3	YML051W	YBR019C	1	0	x	1
4	YLR176C	YML058W.A	0	0	1	0
5	YHR006W	YHR049C.A	0	0	x	x
6	YLR176C	YMR279C	1	1	1	0
7	YLR176C	YIL066C	1	1	1	1
8	YBR150C	YIR027C	x	x	x	x
9	YML051W	YLR081W	1	1	x	0
10	YIL038C	YDR198C	x	x	x	x
11	YMR070W	YJR150C	0	0	0	0
12	YBR033W	YNR050C	0	0	x	x
13	YHL020C	YJL153C	0	0	x	0
14	YOR191W	YDL179W	x	x	x	x
15	YLR278C	YKL134C	x	x	x	x
16	YPR065W	YDR044W	1	0	1	0
17	YHL027W	YLL053C	0	0	0	0
18	YDR310C	YNL318C	1	1	1	1
19	YHL027W	YPL277C	0	0	0	0
20	YOR038C	YPR089W	0	0	x	x
21	YBL103C	YCR097W	1	0	1	0
22	YHL027W	YPL278C	0	0	0	0
23	YGL073W	YPL111W	0	0	0	0
24	YOR162C	YCL002C	0	0	x	0
25	YDR310C	YCL048W	1	1	1	1
26	YPL254W	YGL091C	x	x	x	x
27	YDR310C	YNL319W	0	0	x	x
28	YHL027W	YOR389W	0	0	0	0
29	YLR176C	YGR180C	1	0	1	1
30	YDR207C	YOL131W	1	1	x	1
31	YOL067C	YGR077C	0	0	0	x
32	YOL067C	YFR021W	0	0	x	x
33	YDR310C	YFR032C	1	1	1	1
34	YJR094C	YPR164W	0	0	0	0
35	YOR140W	YKR102W	x	x	0	x
36	YGL237C	YEL013W	0	0	0	0
37	YDR310C	YAL018C	1	1	0	0
38	YFL052W	YAR030C	0	0	x	x
39	YKL112W	YBR238C	0	0	0	0
40	YLR176C	YJL026W	0	0	1	0
41	YCR084C	YMR325W	x	x	x	x
42	YBR033W	YNL032W	0	0	x	x
43	YDL020C	YGR252W	0	0	0	0
44	YDL020C	YDR172W	0	0	x	0
45	YDR207C	YAL054C	1	0	1	1
46	YGR056W	YLL054C	x	x	x	x
47	YCR084C	YAL068C	x	x	x	x
48	YCR084C	YHL046C	x	x	x	x
49	YCR084C	YGR294W	x	x	x	x
50	YCR084C	YDR542W	x	x	x	x
51	YBR033W	YBR291C	0	0	x	x
52	YOR162C	YBL037W	0	0	x	0
53	YCR084C	YLR461W	x	x	x	x
54	YCR084C	YCR104W	x	x	x	x
55	YCR084C	YNR076W	x	x	x	x
56	YDR310C	YGL138C	1	1	1	1
57	YCR084C	YIL176C	x	x	x	x
58	YCR084C	YFL020C	x	x	x	x
59	YJL168C	YNR062C	x	x	x	x
60	YCR084C	YAR020C	x	x	x	x

Ranking	Transcription factor	Target gene	SS <sub>1</sub>	SS <sub>2</sub>	SS <sub>3</sub>	SS <sub>4</sub>
61	YCR084C	YOL161C	x	x	x	x
62	YDR310C	YJL043W	1	0	x	1
63	YBR049C	YER187W.A	0	0	x	x
64	YDR207C	YIL072W	1	1	1	0
65	YLR176C	YPR015C	0	0	x	0
66	YJL176C	YMR011W	x	x	0	x
67	YDR310C	YCL026C.A	0	0	0	0
68	YJL176C	YDR043C	x	x	0	x
69	YCR084C	YAL064W.B	x	x	x	x
70	YBR049C	YLR113W	1	0	0	0
71	YCR084C	YIL172C	x	x	x	x
72	YGL073W	YIR031C	0	0	0	0
73	YIR033W	YMR169C	x	x	x	x
74	YBR033W	YIR034C	0	0	x	x
75	YDR310C	YOL132W	1	1	0	0
76	YCR084C	YAL065C	x	x	x	x
77	YDR207C	YNL012W	1	1	0	0
78	YHL020C	YER026C	0	0	x	0
79	YPL075W	YIL082W	0	0	0	x
80	YDR310C	YOL091W	1	1	0	0
81	YMR043W	YER037W	0	0	x	0
82	YIL084C	YLR303W	x	x	x	x
83	YDR310C	YBR180W	1	1	1	1
84	YCR084C	YKL224C	x	x	x	x
85	YCR084C	YJL223C	x	x	x	x
86	YBR033W	YIL094C	0	0	x	x
87	YCR084C	YOL157C	x	x	x	x
88	YCR084C	YJR158W	x	x	x	x
89	YMR043W	YKR075C	0	0	0	0
90	YBR049C	YNL143C	0	0	x	x
91	YHL020C	YDR502C	0	0	x	0
92	YOL148C	YOR113W	x	x	x	x
93	YJL176C	YGR161C	x	x	0	x
94	YDR310C	YBL098W	0	0	0	0
95	YJL103C	YGR222W	x	x	x	x
96	YDR310C	YLR307W	0	0	x	0
97	YMR043W	YBL069W	0	0	x	0
98	YGL073W	YKL163W	0	0	0	0
99	YCR084C	YIR041W	x	x	x	x
100	YNL216W	YBR033W	0	0	0	0
101	YML099C	YOL140W	1	1	1	1
102	YIR033W	YML130C	x	x	x	x
103	YJL176C	YKL096W	x	x	0	x
104	YDR207C	YIL031W	1	1	0	0
105	YDR207C	YCR010C	1	0	x	0
106	YDL042C	YNL337W	x	x	x	x
107	YDR520C	YBL042C	0	0	x	0
108	YJL127C	YNL332W	x	x	x	x
109	YDR191W	YIR038C	x	x	x	x
110	YDR310C	YPL033C	1	0	x	0
111	YNL236W	YMR031W.A	x	x	x	x
112	YMR043W	YER130C	0	0	0	0
113	YHL020C	YDR497C	1	1	x	0
114	YDR310C	YOR365C	1	1	1	1
115	YNL167C	YBL071C	0	0	0	x
116	YML099C	YJL088W	1	0	1	1
117	YJL176C	YBR230C	x	x	0	x
118	YBR297W	YGR269W	x	x	x	x
119	YDR207C	YLL047W	0	0	x	x
120	YCR084C	YBR301W	x	x	x	x

Ranking	Transcription factor	Target gene	SS <sub>1</sub>	SS <sub>2</sub>	SS <sub>3</sub>	SS <sub>4</sub>
121	YDR310C	YOR339C	1	1	x	0
122	YML099C	YOL058W	1	0	1	1
123	YDR310C	YBR045C	1	1	x	0
124	YDR207C	YPL018W	1	0	0	0
125	YIL130W	YPR109W	x	x	x	x
126	YDR310C	YGR259C	0	0	0	x
127	YDR310C	YGR260W	1	1	1	1
128	YPL075W	YHR046C	0	0	0	0
129	YCR084C	YFL053W	x	x	x	x
130	YIL036W	YBR116C	0	0	x	x
131	YDR310C	YOL047C	1	1	x	0
132	YMR042W	YOL058W	0	0	1	0
133	YMR042W	YOL140W	1	1	1	1
134	YCR084C	YHR211W	x	x	x	x
135	YCR084C	YBR300C	x	x	x	x
136	YDR207C	YGL033W	1	0	0	0
137	YOL004W	YEL020C	x	x	0	x
138	YHL027W	YBR182C	0	0	0	0
139	YCR084C	YIL099W	x	x	x	x
140	YDR207C	YMR306C.A	0	0	0	x
141	YJL089W	YKR071C	0	0	0	0
142	YIR033W	YMR170C	x	x	x	x
143	YIL131C	YAL034W.A	1	1	x	0
144	YDR207C	YMR101C	1	1	x	1
145	YJL127C	YMR096W	x	x	x	x
146	YLR176C	YPL189W	0	0	x	0
147	YLR403W	YPL095C	0	0	0	0
148	YJL127C	YJR156C	x	x	x	x
149	YDR310C	YOR214C	0	0	x	0
150	YNL216W	YOR292C	0	0	1	0
151	YMR043W	YBR054W	1	0	0	0
152	YDR310C	YKR015C	1	1	x	0
153	YKL112W	YDL039C	0	0	0	0
154	YMR043W	YJL016W	0	0	x	0
155	YGL073W	YNL160W	0	0	x	0
156	YMR043W	YER053C	0	0	x	0
157	YIR033W	YMR040W	x	x	x	x
158	YMR043W	YKR058W	0	0	x	0
159	YIR033W	YOL031C	x	x	x	x
160	YOL004W	YER119C	x	x	x	x
161	YIR033W	YOR289W	x	x	x	x
162	YMR043W	YPL188W	0	0	0	0
163	YDR463W	YFR030W	0	0	0	0
164	YBL103C	YLR089C	1	0	0	0
165	YHL020C	YJR073C	0	0	x	0
166	YDR310C	YPR054W	1	1	1	0
167	YLR403W	YBR157C	0	0	0	0
168	YCR084C	YLL055W	x	x	x	x
169	YNL167C	YOL150C	0	0	x	x
170	YOL108C	YNL105W	0	0	x	x
171	YDR310C	YJL038C	1	0	1	0
172	YOR290C	YOR179C	x	x	x	x
173	YPL075W	YNR056C	0	0	x	0
174	YJL168C	YNR057C	x	x	x	x
175	YPL254W	YMR031W.A	x	x	x	x
176	YCR084C	YOR009W	x	x	x	x
177	YHL020C	YNL170W	0	0	x	x
178	YKL043W	YPL120W	0	0	x	0
179	YIR033W	YMR105C	x	x	x	x
180	YHL020C	YLR133W	0	0	x	0

Ranking	Transcription factor	Target gene	SS <sub>1</sub>	SS <sub>2</sub>	SS <sub>3</sub>	SS <sub>4</sub>
181	YJL176C	YCR020C	x	x	x	x
182	YLR403W	YHL028W	0	0	0	0
183	YGL073W	YHL043W	0	0	x	0
184	YIR033W	YHR087W	x	x	x	x
185	YJL176C	YDR137W	x	x	x	x
186	YIR033W	YDL124W	x	x	x	x
187	YDR207C	YHR202W	1	1	0	0
188	YMR043W	YJR096W	0	0	x	0
189	YDR310C	YJR025C	1	1	1	1
190	YDR207C	YLL030C	1	1	x	x
191	YPL075W	YGR109W.A	0	0	0	0
192	YPL075W	YLR432W	0	0	x	0
193	YCR084C	YDR402C	x	x	x	x
194	YNL236W	YOR218C	x	x	x	x
195	YPL075W	YHR216W	0	0	x	0
196	YHL020C	YLR132C	0	0	x	0
197	YLR228C	YLR165C	x	x	x	x
198	YDR310C	YNL204C	1	1	0	0
199	YJL176C	YCL040W	x	x	0	x
200	YCR084C	YGL158W	x	x	x	x
201	YNL314W	YHR066W	0	0	x	0
202	YKL112W	YLR162W	0	0	x	0
203	YDR207C	YHR014W	1	1	1	0
204	YMR016C	YKL043W	1	0	0	1
205	YIL036W	YDR453C	0	0	x	0
206	YBR289W	YDR416W	x	x	x	x
207	YGL073W	YGR121C	0	0	x	0
208	YDR310C	YBR148W	1	1	1	1
209	YNL216W	YHR156C	0	0	0	0
210	YMR043W	YDR222W	0	0	x	0
211	YHL027W	YLL052C	0	0	0	0
212	YOL148C	YHR110W	x	x	x	x
213	YLR039C	YGL229C	x	x	x	x
214	YKL032C	YGL250W	0	0	x	0
215	YLR403W	YOR338W	0	0	0	0
216	YCR081W	YIL009W	x	x	x	x
217	YOR162C	YNL195C	0	0	x	0
218	YDR310C	YER085C	1	1	0	0
219	YDR310C	YOR364W	0	0	x	x
220	YNL314W	YOL138C	0	0	0	0
221	YPL075W	YIL083C	0	0	0	0
222	YDR310C	YMR244W	0	0	0	0
223	YOL004W	YEL012W	x	x	0	x
224	YCR084C	YGR293C	x	x	x	x
225	YPL075W	YAR075W	0	0	x	0
226	YMR043W	YER150W	1	0	x	0
227	YNL167C	YOL151W	1	1	0	0
228	YOL051W	YPL181W	x	x	x	x
229	YJL127C	YNR064C	x	x	x	x
230	YDL020C	YJL163C	0	0	x	0
231	YHL020C	YGL077C	0	0	x	0
232	YIL036W	YDR034W.B	0	0	x	0
233	YDR310C	YOR190W	1	1	x	0
234	YIL036W	YAL061W	0	0	x	0
235	YLR039C	YOR040W	x	x	x	x
236	YMR273C	YGL100W	x	x	x	x
237	YNL236W	YHL043W	x	x	x	x
238	YGR288W	YLR312W.A	x	x	x	x
239	YPR065W	YJR047C	1	1	1	0
240	YJL176C	YCR047C	x	x	0	x

Ranking	Transcription factor	Target gene	SS <sub>1</sub>	SS <sub>2</sub>	SS <sub>3</sub>	SS <sub>4</sub>
241	YML099C	YER069W	1	1	1	1
242	YLR442C	YDR449C	x	x	x	x
243	YMR042W	YER069W	1	1	1	1
244	YDR310C	YKR034W	0	0	0	0
245	YIR033W	YOL084W	x	x	x	x
246	YJL176C	YOR374W	x	x	x	x
247	YOL068C	YJR025C	x	x	x	x
248	YDR310C	YFR023W	1	1	1	1
249	YJL176C	YCR004C	x	x	x	x
250	YJL176C	YER062C	x	x	0	x
251	YDR207C	YPR007C	1	1	x	0
252	YMR053C	YDR189W	0	0	x	0
253	YLR014C	YKL170W	0	0	x	x
254	YDR207C	YBR302C	0	0	x	0
255	YOL004W	YER044C	x	x	0	x
256	YPL129W	YJR103W	x	x	x	x
257	YOL148C	YJR162C	x	x	x	x
258	YER040W	YDR496C	0	0	x	0
259	YOR191W	YKL100C	x	x	x	x
260	YOL089C	YLL028W	0	0	0	x
261	YPL075W	YFL029C	0	0	x	0
262	YIR033W	YHR104W	x	x	x	x
263	YMR043W	YER067W	0	0	x	0
264	YCR084C	YCL069W	x	x	x	x
265	YDR207C	YNR057C	0	0	0	0
266	YDR207C	YHL048W	0	0	0	0
267	YLR403W	YPL159C	0	0	0	0
268	YOL068C	YGL230C	x	x	x	x
269	YJL127C	YNL335W	x	x	x	x
270	YHR006W	YER008C	0	0	x	x
271	YCR084C	YML131W	x	x	x	x
272	YPR022C	YBR281C	x	x	x	x
273	YOR140W	YBR260C	x	x	x	x
274	YCR084C	YJR159W	x	x	x	x
275	YMR280C	YER066W	x	x	0	x
276	YMR037C	YLR323C	0	0	x	0
277	YKR036C	YMR158W	x	x	x	x
278	YOR290C	YLR092W	x	x	x	x
279	YDR207C	YHL024W	1	0	0	0
280	YOR290C	YOR119C	x	x	x	x
281	YDR310C	YGL015C	1	1	0	0
282	YCR084C	YAR062W	x	x	x	x
283	YLR418C	YAL062W	x	x	x	x
284	YLR418C	YJL171C	x	x	x	x
285	YBR289W	YIR017C	x	x	x	x
286	YMR042W	YJL088W	1	0	1	1
287	YJL168C	YLR087C	x	x	x	x
288	YPL075W	YDL066W	0	0	0	0
289	YOL068C	YLR307W	x	x	x	x
290	YGL181W	YNL021W	0	0	x	0
291	YNL216W	YOR394W	0	0	0	0
292	YNL314W	YMR039C	0	0	0	0
293	YMR273C	YEL030W	x	x	x	x
294	YLR182W	YIL120W	0	0	x	0
295	YGL073W	YBR067C	0	0	0	0
296	YDR310C	YER106W	1	1	x	0
297	YHL020C	YNL256W	0	0	x	0
298	YJL127C	YLR217W	x	x	x	x
299	YGL073W	YJL079C	0	0	0	0
300	YBL008W	YPR109W	0	0	x	x