

# Supplementary tables: A robust permutation test for SILAC experiments

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	0.1893	0.3159	0.3125	0.1175	0.1387
0.3	0.5	1	0.1895	0.2840	0.2963	0.1909	0.2022
0.3	0.5	4	0.2121	0.2689	0.2842	0.2688	0.2721
0.3	1	0.25	0.0747	0.2886	0.2988	0.0543	0.0953
0.3	1	1	0.0853	0.2800	0.3074	0.0989	0.1238
0.3	1	4	0.1267	0.2573	0.2876	0.1941	0.2029
0.3	2	0.25	0.0272	0.2634	0.2886	0.0395	0.0896
0.3	2	1	0.0342	0.2665	0.2981	0.0531	0.0903
0.3	2	4	0.0664	0.2465	0.2910	0.1050	0.1247
0.2	0.5	0.25	0.1199	0.2046	0.2016	0.0652	0.0774
0.2	0.5	1	0.1177	0.1875	0.1964	0.1253	0.1297
0.2	0.5	4	0.1227	0.1646	0.1795	0.1692	0.1719
0.2	1	0.25	0.0407	0.1729	0.2008	0.0324	0.0544
0.2	1	1	0.0561	0.1662	0.2059	0.0691	0.0819
0.2	1	4	0.0723	0.1466	0.1745	0.1243	0.1334
0.2	2	0.25	0.0118	0.0564	0.1590	0.0199	0.0557
0.2	2	1	0.0166	0.0995	0.1628	0.0301	0.0596
0.2	2	4	0.0285	0.1004	0.1198	0.0609	0.0753
0.1	0.5	0.25	0.0563	0.0961	0.0956	0.0299	0.0363
0.1	0.5	1	0.0585	0.0944	0.0987	0.0628	0.0650
0.1	0.5	4	0.0543	0.0780	0.0925	0.0861	0.0882
0.1	1	0.25	0.0181	0.0417	0.1019	0.0132	0.0254
0.1	1	1	0.0202	0.0446	0.0863	0.0247	0.0309
0.1	1	4	0.0280	0.0488	0.0763	0.0539	0.0581
0.1	2	0.25	0.0050	0.0013	0.0040	0.0094	0.0220
0.1	2	1	0.0066	0.0072	0.0217	0.0146	0.0276
0.1	2	4	0.0107	0.0211	0.0320	0.0307	0.0353

Table I  
AVERAGE FDR OVER THE 10 REPETITIONS OF EACH OF THE 27 SIMULATION SCENARIOS

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	0.9350	0.9492	0.9951	0.9566	0.9698
0.3	0.5	1	0.9590	0.9616	0.9954	0.9530	0.9676
0.3	0.5	4	0.9940	0.9820	0.9963	0.9519	0.9636
0.3	1	0.25	0.9568	0.9866	1.0000	0.9580	0.9695
0.3	1	1	0.9772	0.9863	1.0000	0.9503	0.9661
0.3	1	4	0.9966	0.9910	0.9997	0.9494	0.9654
0.3	2	0.25	0.9949	0.9992	1.0000	0.9500	0.9622
0.3	2	1	0.9983	0.9991	0.9997	0.9512	0.9678
0.3	2	4	0.9991	0.9989	0.9997	0.9558	0.9683
0.2	0.5	0.25	0.9327	0.9475	0.9915	0.9469	0.9614
0.2	0.5	1	0.9596	0.9574	0.9927	0.9531	0.9655
0.2	0.5	4	0.9908	0.9704	0.9928	0.9542	0.9644
0.2	1	0.25	0.9579	0.9793	0.9990	0.9562	0.9657
0.2	1	1	0.9691	0.9814	0.9987	0.9502	0.9687
0.2	1	4	0.9904	0.9883	0.9978	0.9436	0.9605
0.2	2	0.25	0.9907	0.9973	0.9983	0.9513	0.9671
0.2	2	1	0.9921	0.9987	0.9992	0.9524	0.9636
0.2	2	4	0.9970	0.9970	0.9983	0.9526	0.9667
0.1	0.5	0.25	0.9429	0.9463	0.9910	0.9504	0.9654
0.1	0.5	1	0.9537	0.9499	0.9898	0.9577	0.9695
0.1	0.5	4	0.9811	0.9688	0.9886	0.9550	0.9695
0.1	1	0.25	0.9559	0.9699	0.9915	0.9527	0.9659
0.1	1	1	0.9615	0.9679	0.9928	0.9520	0.9641
0.1	1	4	0.9785	0.9774	0.9940	0.9461	0.9592
0.1	2	0.25	0.9774	0.9887	0.9925	0.9541	0.9672
0.1	2	1	0.9804	0.9900	0.9935	0.9524	0.9691
0.1	2	4	0.9889	0.9911	0.9909	0.9547	0.9713

Table II  
AVERAGE TPR OVER THE 10 REPETITIONS OF EACH OF THE 27 SIMULATION SCENARIOS

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	0.8048	0.6632	0.6852	0.8822	0.8716
0.3	0.5	1	0.8134	0.7044	0.7018	0.8086	0.8046
0.3	0.5	4	0.8078	0.7336	0.7194	0.7202	0.7212
0.3	1	0.25	0.9156	0.7098	0.7012	0.9320	0.9070
0.3	1	1	0.9212	0.7248	0.6928	0.8938	0.8822
0.3	1	4	0.8962	0.7524	0.7162	0.8042	0.8034
0.3	2	0.25	0.9766	0.7442	0.7114	0.9366	0.9058
0.3	2	1	0.9740	0.7446	0.7022	0.9284	0.9102
0.3	2	4	0.9498	0.7708	0.7130	0.8906	0.8814
0.2	0.5	0.25	0.8446	0.7630	0.7930	0.9048	0.9048
0.2	0.5	1	0.8650	0.7886	0.7996	0.8530	0.8572
0.2	0.5	4	0.8804	0.8212	0.8184	0.8054	0.8090
0.2	1	0.25	0.9340	0.8194	0.7986	0.9394	0.9282
0.2	1	1	0.9300	0.8302	0.7940	0.9048	0.9068
0.2	1	4	0.9300	0.8536	0.8280	0.8466	0.8490
0.2	2	0.25	0.9832	0.9498	0.8444	0.9458	0.9282
0.2	2	1	0.9804	0.9108	0.8434	0.9388	0.9226
0.2	2	4	0.9740	0.9078	0.8886	0.9120	0.9098
0.1	0.5	0.25	0.8976	0.8604	0.8970	0.9288	0.9360
0.1	0.5	1	0.9052	0.8660	0.8934	0.9044	0.9120
0.1	0.5	4	0.9324	0.8984	0.8994	0.8788	0.8884
0.1	1	0.25	0.9446	0.9348	0.8914	0.9462	0.9468
0.1	1	1	0.9470	0.9298	0.9082	0.9344	0.9394
0.1	1	4	0.9552	0.9344	0.9204	0.9028	0.9098
0.1	2	0.25	0.9752	0.9886	0.9896	0.9504	0.9508
0.1	2	1	0.9766	0.9846	0.9744	0.9448	0.9478
0.1	2	4	0.9804	0.9728	0.9624	0.9320	0.9422

Table III  
AVERAGE ACC OVER THE 10 REPETITIONS OF EACH OF THE 27 SIMULATION SCENARIOS

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	0.8299	0.8214	0.7784	0.8905	0.8771
0.3	0.5	1	0.8150	0.7931	0.7536	0.7934	0.7799
0.3	0.5	4	0.8078	0.7878	0.7639	0.6199	0.6121
0.3	1	0.25	0.9573	0.9655	0.9544	0.9347	0.9188
0.3	1	1	0.9486	0.9465	0.9228	0.9038	0.8900
0.3	1	4	0.9230	0.9220	0.8910	0.7889	0.7762
0.3	2	0.25	0.9947	0.9977	0.9975	0.9408	0.9168
0.3	2	1	0.9908	0.9948	0.9936	0.9310	0.9171
0.3	2	4	0.9806	0.9853	0.9799	0.8964	0.8832
0.2	0.5	0.25	0.8246	0.8095	0.7673	0.8942	0.8819
0.2	0.5	1	0.8158	0.7933	0.7492	0.7829	0.7699
0.2	0.5	4	0.8132	0.7815	0.7448	0.6426	0.6308
0.2	1	0.25	0.9633	0.9625	0.9512	0.9436	0.9263
0.2	1	1	0.9403	0.9501	0.9281	0.8941	0.8776
0.2	1	4	0.9029	0.9042	0.8876	0.7777	0.7637
0.2	2	0.25	0.9963	0.9981	0.9976	0.9531	0.9283
0.2	2	1	0.9913	0.9967	0.9948	0.9449	0.9275
0.2	2	4	0.9799	0.9852	0.9767	0.8965	0.8799
0.1	0.5	0.25	0.8242	0.8198	0.7703	0.8753	0.8645
0.1	0.5	1	0.7689	0.7677	0.7255	0.7322	0.7239
0.1	0.5	4	0.8251	0.7923	0.7747	0.6428	0.6387
0.1	1	0.25	0.9677	0.9691	0.9594	0.9456	0.9284
0.1	1	1	0.9390	0.9447	0.9311	0.9016	0.8892
0.1	1	4	0.9161	0.9122	0.8889	0.7968	0.7841
0.1	2	0.25	0.9953	0.9961	0.9959	0.9412	0.9237
0.1	2	1	0.9913	0.9946	0.9940	0.9362	0.9234
0.1	2	4	0.9845	0.9880	0.9847	0.8994	0.8874

Table IV  
AVERAGE AUC OVER 10 REPETITIONS OF EACH OF THE 27 SIMULATION SCENARIOS

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	3	1	2	5	4
0.3	0.5	1	5	2	1	4	3
0.3	0.5	4	5	3	1	4	2
0.3	1	0.25	4	2	1	5	3
0.3	1	1	5	2	1	4	3
0.3	1	4	5	2	1	4	3
0.3	2	0.25	5	2	1	4	3
0.3	2	1	5	2	1	4	3
0.3	2	4	5	2	1	4	3
0.2	0.5	0.25	3	1	2	5	4
0.2	0.5	1	5	2	1	4	3
0.2	0.5	4	5	4	1	3	2
0.2	1	0.25	4	2	1	5	3
0.2	1	1	5	2	1	4	3
0.2	1	4	5	2	1	4	3
0.2	2	0.25	5	2	1	4	3
0.2	2	1	5	2	1	4	3
0.2	2	4	5	2	1	4	3
0.1	0.5	0.25	3	1	2	5	4
0.1	0.5	1	5	2	1	4	3
0.1	0.5	4	5	4	1	3	2
0.1	1	0.25	4	2	1	5	3
0.1	1	1	5	2	1	4	3
0.1	1	4	5	4	1	3	2
0.1	2	0.25	3	5	4	2	1
0.1	2	1	5	4	2	3	1
0.1	2	4	5	4	2	3	1

Table V  
RANKS FOR FDR OVER EACH OF THE 27 SIMULATION SCENARIOS

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	1	2	5	3	4
0.3	0.5	1	2	3	5	1	4
0.3	0.5	4	4	3	5	1	2
0.3	1	0.25	1	4	5	2	3
0.3	1	1	3	4	5	1	2
0.3	1	4	4	3	5	1	2
0.3	2	0.25	3	4	5	1	2
0.3	2	1	3	4	5	1	2
0.3	2	4	4	3	5	1	2
0.2	0.5	0.25	1	3	5	2	4
0.2	0.5	1	3	2	5	1	4
0.2	0.5	4	4	3	5	1	2
0.2	1	0.25	2	4	5	1	3
0.2	1	1	3	4	5	1	2
0.2	1	4	4	3	5	1	2
0.2	2	0.25	3	4	5	1	2
0.2	2	1	3	4	5	1	2
0.2	2	4	3	4	5	1	2
0.1	0.5	0.25	1	2	5	3	4
0.1	0.5	1	2	1	5	3	4
0.1	0.5	4	4	2	5	1	3
0.1	1	0.25	2	4	5	1	3
0.1	1	1	2	4	5	1	3
0.1	1	4	4	3	5	1	2
0.1	2	0.25	3	4	5	1	2
0.1	2	1	3	4	5	1	2
0.1	2	4	3	5	4	1	2

Table VI  
RANKS FOR TPR OVER EACH OF THE 27 SIMULATION SCENARIOS

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	3	1	2	5	4
0.3	0.5	1	5	2	1	4	3
0.3	0.5	4	5	4	1	2	3
0.3	1	0.25	4	2	1	5	3
0.3	1	1	5	2	1	4	3
0.3	1	4	5	2	1	4	3
0.3	2	0.25	5	2	1	4	3
0.3	2	1	5	2	1	4	3
0.3	2	4	5	2	1	4	3
0.2	0.5	0.25	3	1	2	4.5	4.5
0.2	0.5	1	5	1	2	3	4
0.2	0.5	4	5	4	3	1	2
0.2	1	0.25	4	2	1	5	3
0.2	1	1	5	2	1	3	4
0.2	1	4	5	4	1	2	3
0.2	2	0.25	5	4	1	3	2
0.2	2	1	5	2	1	4	3
0.2	2	4	5	2	1	4	3
0.1	0.5	0.25	3	1	2	4	5
0.1	0.5	1	4	1	2	3	5
0.1	0.5	4	5	3	4	1	2
0.1	1	0.25	3	2	1	4	5
0.1	1	1	5	2	1	3	4
0.1	1	4	5	4	3	1	2
0.1	2	0.25	3	4	5	1	2
0.1	2	1	4	5	3	1	2
0.1	2	4	5	4	3	1	2

Table VII  
RANKS FOR ACC OVER EACH OF THE 27 SIMULATION SCENARIOS

$2\pi$	$\mu$	$\sigma^2$	Permutation test	z-test	Robust z-test	t-test	Wilcoxon signed-rank test
0.3	0.5	0.25	3	2	1	5	4
0.3	0.5	1	5	3	1	4	2
0.3	0.5	4	5	4	3	2	1
0.3	1	0.25	4	5	3	2	1
0.3	1	1	5	4	3	2	1
0.3	1	4	5	4	3	2	1
0.3	2	0.25	3	5	4	2	1
0.3	2	1	3	5	4	2	1
0.3	2	4	4	5	3	2	1
0.2	0.5	0.25	3	2	1	5	4
0.2	0.5	1	5	4	1	3	2
0.2	0.5	4	5	4	3	2	1
0.2	1	0.25	5	4	3	2	1
0.2	1	1	4	5	3	2	1
0.2	1	4	4	5	3	2	1
0.2	2	0.25	3	5	4	2	1
0.2	2	1	3	5	4	2	1
0.2	2	4	4	5	3	2	1
0.1	0.5	0.25	3	2	1	5	4
0.1	0.5	1	5	4	2	3	1
0.1	0.5	4	5	4	3	2	1
0.1	1	0.25	4	5	3	2	1
0.1	1	1	4	5	3	2	1
0.1	1	4	5	4	3	2	1
0.1	2	0.25	3	5	4	2	1
0.1	2	1	3	5	4	2	1
0.1	2	4	3	5	4	2	1

Table VIII  
RANKS FOR AUC OVER EACH OF THE 27 SIMULATION SCENARIOS