

Table S3 Comparison of fluxes distribution in the central carbon metabolism among experimental method and seven predictive methods in the NOX over-expression mutant strain (NOX)

Reactions	Measured	HPCOF	E-Fmin	*GIMME	*E-Flux	*IMAT	*Lee	*FBA
ACKr	-7.9	-6.9	0.6546	0.5731	-14.4353	4	0	0.0001
ACONTa	5.6	0.47	5.6312	9.7123	0.5013	20.8527	0	0.0006
ACONTb	5.6	0.47	5.6312	9.7123	0.5013	20.8527	0	0.0006
AKGDH	4.8	0.03	4.4197	8.6517	0	18.8527	0	0.0004
CS	5.6	0.51	5.6312	9.7123	0.5013	20.8527	5.9476	0.0006
ENO	19.3	21.3	16.7698	19.4635	10.6834	8.8527	15.9253	0.0017
EX_ac(e)	3.28	7.4	0	0	14.6729	0	9.8568	0
Ec_biomass	0.63	0.01	1.1267	0.9863	0.4091	0	0	0.0001
FBA	9.6	8.1	8.7199	10.8758	4.6676	6.1224	4.195	0.0009
FUM	4.8	0	5.5922	9.6782	0.4871	23.8527	1.4668	0.0006
G6PDH2r	4.9	0.7	6.0121	0	6.7083	8.8237	7.5353	0.0006
GAPD	20.4	21.8	18.7017	21.1014	11.3627	17.8527	15.9253	0.0019
GLCptspp	11.7	11.5	11.7	11.7303	9.2028	7.3527	11.7303	0.0012
GND	4.9	0.7	6.0121	0	0	7.8237	7.5353	0.0006
ICDHyr	5.6	0.33	5.6312	9.7123	0.4399	19.8527	0	0.0006

MDH	4.5	-1.1	5.5922	9.6788	0.5488	23.8527	1.4668	0.0006
ME1	0.2	0.04	0	0	0	0	0	0
NADTRHD	5.5	0.1	0	0	0	1	0	0
PDH	15	12	9.3212	12.8367	0	9.8527	0	0.0009
PFK	9.6	8.1	8.7199	10.8758	4.6676	6.1224	4.195	0.0009
PGI	6.8	11	5.6879	11.7303	5.0219	-1.471	4.195	0.0006
PGK	-20.4	-21.7	-18.7017	-21.1014	-11.3627	-17.8527	-15.9253	-0.0019
PGL	4.9	0.7	6.0121	0	6.7083	8.8237	7.5353	0.0006
PGM	-19.3	-21.2	-16.7698	-19.4635	-10.6834	-8.8527	-15.9253	-0.0017
PPC	4	2.06	3.3354	2.9191	1.1492	2	0	0.0003
PPCK	1.8	0.05	0	0	0	1	0	0
PTAr	7.9	6.9	-0.6546	-0.5731	14.4353	-4	0	-0.0001
PYK	4.9	4.7	0.8215	4.015	0	1	4.195	0.0001
RPE	2.8	-0.15	3.1384	-0.7613	-0.3157	3.2158	0	0.0003
RPI	-2.1	-0.02	-2.8289	-0.7221	-0.2995	-4.6079	-7.5353	-0.0003
SUCDi	4.8	0.01	4.4204	8.6524	7.2418	20.8527	2.7813	0.0005
SUCOAS	-4.8	-0.48	-3.8282	-8.134	0.2147	-18.8527	0	-1.17

TALA	1.5	-0.02	1.7788	-0.1972	-0.0818	1.6079	0	0.0002
TKT1	1.5	-0.02	1.7788	-0.1972	-0.0818	1.6079	0	0.0002
TKT2	1.3	-0.11	1.3596	-0.5641	-0.2339	1.6079	0	0.0001
TPI	9.6	10.2	0.5607	10.7364	0.1987	6.1224	4.195	0.0009

* Results are taken from the reference 14.