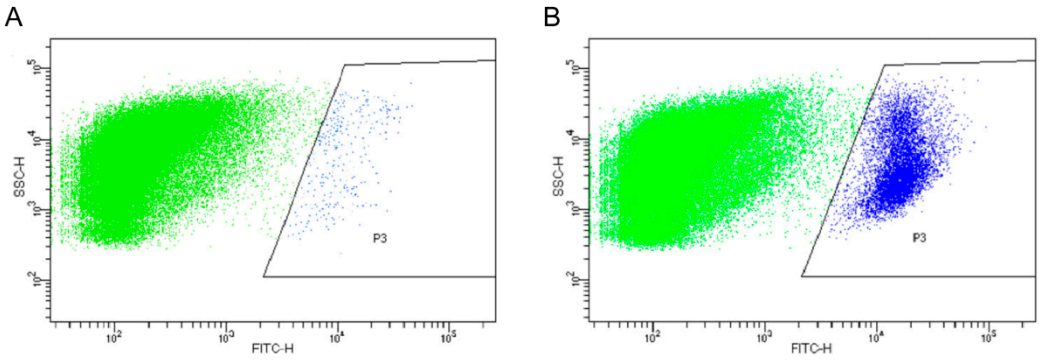

Figure S1. GFP fluorescence-based sorting of *cdc42*-overexpressing protoplasts by flow cytometry. (A) Control. (B) Protoplast of A2H transformed with *cdc42*-overexpressing cassette. Blue dots indicated the tranformants overexpressing Cdc42 and GFP.

Table S1. Primers used in this study.

Primers	Sequences (5'–3')
cdc42-up-F	GCGTCTCTCTCACTCCATTGG
cdc42-up-R	GTGAGTTCAGGCTTTTTCATGGTGGTGCTGCTTGTGCTGATG
cdc42-down-F	GTCCGAGGGCAAAGGAATAGAACCACGAGTCTCAGGAAATTG
cdc42-down-R	CCAGCTCAGTCAGCTCTTCCTC
cla4-up-F	GCGATTCTTGCGCGCATCTGATC
cla4-up-R	GTGAGTTCAGGCTTTTTCATGTTGTTCGTCTGCTGGCGAG
cla4-down-F	GTCCGAGGGCAAAGGAATAGAAATAAACGGAGCAGTGCTG
cla4-down-R	ATGTTCCTGCACTGCAATTAC
rac1-up-F	TCTCACGCGCCACACACCCAC
rac1-up-R	GTGAGTTCAGGCTTTTTCATGTCCCAAGTTTTCCTTTTCGGC
rac1-down-F	GTCCGAGGGCAAAGGAATAGAGGAGATTCTGGCCGTGCCATCTCG
rac1-down-R	TGCCGGTCCATCTGCTGCTAT
ras1-up-F	ACCTCCTACCTCATCGCCTGTG
ras1-up-R	GTGAGTTCAGGCTTTTTCATTGTGAACGAGACTGTATGAGG
ras1-down-F	GTCCGAGGGCAAAGGAATAGGAGCGAGAAGTCACCAGGCAAG
ras1-down-R	ATAAATGGGATATAAGAGAAGAAAGTATGACC
ras2-up-F	CCGTCTCATAGGGACTTTCTG
ras2-up-R	GTGAGTTCAGGCTTTTTCATGATGGGCGCAAAGAGTCAGCGGTTG
ras2-down-F	GTCCGAGGGCAAAGGAATAGGCGCTTCTCATTCGTTGCCGC
ras2-down-R	GAGGTTAAATAAAGATATAAACAGATTCGACA
rho1-up-F	TCGAGAGCCTAGAACGCAGCG
rho1-up-R	GTGAGTTCAGGCTTTTTCATGGCGTCTGTGAAGCTTTGCGG
rho1-down-F	GTCCGAGGGCAAAGGAATAGACGGGTTCTCACCTTGTGCCTG
rho1-down-R	TAGAATAACCACTCGAAGCATAC
spa2-up-F	GCCACGGCTTCATTTTCCTTG
spa2-up-R	GTGAGTTCAGGCTTTTTCATTGCGGGTGGTGGGAGCGAGGC
spa2-down-F	GTCCGAGGGCAAAGGAATAGGCCTGGCAAGCCGGCATTAATC
spa2-down-R	ACATTTGCGTGGTGCAAGTGG
hph-F	ATGAAAAAGCCTGAACTCACCGCG
hph-R	CTATTCCTTTGCCCTCGGACGAGTG
Ptef-F	GGGACAGAATGTACAGTACTATACT
Ptef-R	TTTGACGGTTTGTGTGATGTAG
cdc42-F	CTACATCACACAAACCGTCAAAATGGTGGTCGCAACCATCAAG
cdc42-R	AAGTTCAGGGTCTGCTTGACTAGAATGAGGCACTTGTGGG
2A-F	GTCAAGCAGACCCTGAACTTC
eGFP-R	TTACTTGTACAGCTCGTCCATGC
Tegl1-F	TGGACGAGCTGTACAAGTAAAGCGTTGACTTGCCTCTGGTC
Tegl1-R	TGCATTTCAAGGGCGTTGCTG
cdc42-RT-F	CAACCATCAAGTGCGTTGTCGTC
cdc42-RT-R	CTCGTCACCGATCATGACGGTGA
cla4-RT-F	CAGATCTCCGCCCCTCAACGTCTC
cla4-RT-R	CAGAGGCACCCTGACCGATCTTC

rac1-RT-F	ATCGCTGAAGTGTGTCGTGACCG
rac1-RT-R	TCTCGGGGAGCCACTTTGCGGCA
ras1-RT-F	CAGCAGCAACCAAGTTCCTGCGAG
ras1-RT-R	TTCGGTAAGAGTCTTCAATTGTGG
ras2-RT-F	CGTCGAGACGTACGACCCGACA
ras2-RT-R	GAGGAGGCTACCGACTCCTTGAC
rho1-RT-F	TTCCCTGAGGTCTACGTCCCTAC
rho1-RT-R	GACCTCCGAGATCCACTTCTCAAG
spa2-RT-F	GACGACGATGAGGCGGATAAGAAG
spa2-RT-R	CCTGCTTGAGCGAGTTGCTAAGC
cel7b-RT-F	GCCAACCAGTATAACACGGCC
cel7b-RT-R	GCCGTAGTAGCTTTTGTAGCCG
cel3a-RT-F	GCAGACAGTCACTCAACATCGG
cel3a-RT-R	CCGTCTTGAAGGCATAGCGATG
cel3d-RT-F	CATCTCAAGGTCTCCGAGGTAG
cel3d-RT-R	CTAGTACCTCAGAGACGGCATC
cel3c-RT-F	CTGCTGGCTGGTATCGACTTCTG
cel3c-RT-R	CACATGCGCACTCTTAGCGATG
cel1a-RT-F	ACGGCTGCCTACCAGATCGAG
cel1a-RT-R	ACTTGACGTAGTGGTCGATGC
cel45a-RT-F	CACCACGCGCTACTACGATGGG
cel45a-RT-R	GGTCACCATGACGATGATGCTC
cel12a-RT-F	CGTCAAGTCGTACCAGAACTC
cel12a-RT-R	CCGTATTTGCCAAGCCAGATCAT
cel61a-RT-F	CCTTGACAACGGCTTCGTTTCAC
cel61a-RT-R	CTTGAAGAACTCAAGCGTCGTC
gh31-1-RT-F	CTACCAGACTGAGGACCGCATCC
gh31-1-RT-R	GGAGGTACTGAGACTCGAAGAC
bxl1-RT-F	CTCGAGGAGCTCATTCTCAACAC
bxl1-RT-R	TCGAGATGATGTCGGCAATCTGG

Table S2. Proteome data set of A2H and OCdc42 strains.

Protein ID	Annotation	Name	Family	OCdc42_iBAQ	A2H_iBAQ
TRIREDRAFT_39942	*β*-1,3-endoglucanase	TRIREDRAFT_39942	GH17	0	3767.2
TRIREDRAFT_72704	*α*-galactosidase	Agl3	GH27	213.5	3382.3
TRIREDRAFT_123232	Endo-*β*-1,4-glucanase	Cel12a	GH12	142420	284490
TRIREDRAFT_69276	Endo-*β*-1,6-galactanase	TRIREDRAFT_69276	GH30	118210	111500
TRIREDRAFT_123039	Cell wall protein	CwpB	CWP	2687.7	2526.7
TRIREDRAFT_120961	Endoglucanase-7	Cel61b	GH61	42640	18027
TRIREDRAFT_54219	Carbohydrate esterase family 5	TRIREDRAFT_54219	CE5	6438.2	2403.1
TRIREDRAFT_120312	Endoglucanase	Cel5a	GH5	1329000	362200
TRIREDRAFT_123989	Cellobiohydrolase I	Cel7a (Cbh1)	GH7	3035500	653120
TRIREDRAFT_72567	Cellobiohydrolase II	Cel6a (Cbh2)	GH6	7542200	1123500
TRIREDRAFT_76210	Alpha-L-arabinofuranosidase	Abf2	GH62	210760	31025
TRIREDRAFT_73638	Cellulose induced protein 1	Cip1	CBM1	1721000	168440
TRIREDRAFT_123283	*α*-L-arabinofuranosidase	Abf1	GH54	126850	10167
TRIREDRAFT_123992	Non-Catalytic module family expansin	TRIREDRAFT_123992	CBM1	3022600	229060
TRIREDRAFT_123940	4-O-methyl-glucuronoyl methylesterase	Cip2	CBM1	2178300	98967
TRIREDRAFT_120229	Endo-1,4-*β*-xylanase 3	Xyn3	GH10	1834500	76059
TRIREDRAFT_49081	Xyloglucanase	Cel74a	GH74	3329800	133560
TRIREDRAFT_121127	Xylan 1,4-*β*-xylosidase	Bxl1	GH3	1834900	70219
TRIREDRAFT_73643	Glycoside hydrolase family 61	Cel61a	GH61	2098100	66246
TRIREDRAFT_74223	Endo-1,4-*β*-xylanase 1	Xyn1	GH11	22036610	576316.8
TRIREDRAFT_122081	Glucanase	Cel7b (Egl1)	GH7	5256400	133010
TRIREDRAFT_70845	Endo-*β*-1,3-glucanase	TRIREDRAFT_70845	PL3	27663.1	652.3
TRIREDRAFT_72526	*α*-glucuronidase	AguA	GH67	1441100	15951
TRIREDRAFT_5836	*β*-mannosidase	TRIREDRAFT_5836	GH2	207260	1841.7
TRIREDRAFT_82235	*α*-glucosidase	GH31-1	GH31	121410	1008.6
TRIREDRAFT_110894	Endo-*β*-1,6-galactanase	TRIREDRAFT_110894	GH30	179340	1300.8
TRIREDRAFT_21725	*β*-hexosaminidase	Nag1	GH20	161110	863.4
TRIREDRAFT_74198	*α*-1,2-mannosidase	TRIREDRAFT_74198	GH92	268640	1138.2
TRIREDRAFT_72632	*α*-galactosidase	Agl1	GH27	1541700	2329.1
TRIREDRAFT_76672	*β*-glucosidase	cel3a (Bgl1)	GH3	834810	81

TRIREDRAFT_68067	Cell wall protein	CwpA	CWP	4705.8	0
TRIREDRAFT_120873	α-1,3-glucanase	TRIREDRAFT_120873	GH71	41540	0
TRIREDRAFT_73632	Carbohydrate esterase family 5	Axe1	CE5	13187	0
TRIREDRAFT_58282	Carbohydrate esterase family 9	TRIREDRAFT_58282	CE9	48051	0
TRIREDRAFT_80240	β-galactosidase	TRIREDRAFT_80240	GH35	14154	0
TRIREDRAFT_104797	β-glucosidase	TRIREDRAFT_104797	GH3	33223	0
TRIREDRAFT_76227	β-glucosidase	TRIREDRAFT_76227	GH3	3512.3	0
TRIREDRAFT_80833	Chitinase	Chi18-5	GH18	636930	0
TRIREDRAFT_58239	Chitinase	TRIREDRAFT_58239	GH18	329.9	0
TRIREDRAFT_82616	Membrane-bound endoglucanase	Cel5b	GH5	19466	0
TRIREDRAFT_107850	Feruloyl esterase	Fae1	CE1	392.6	0
TRIREDRAFT_76852	β-glycosidase	TRIREDRAFT_76852	GH2	8630.1	0
TRIREDRAFT_124016	β-galactosidase	Agl2	GH36	59555	0
TRIREDRAFT_77299	β-galactosidase/β-glucuronidase	TRIREDRAFT_77299	GH2	7371	0
TRIREDRAFT_66792	Membrane-bound β-glycosidase	TRIREDRAFT_66792	GH17	77753	0
TRIREDRAFT_56996	Mannan endo-1,4-β-mannosidase	Man5a	GH5	3372200	0
TRIREDRAFT_67844	α-1,6-mannanase	TRIREDRAFT_67844	GH76	23799	0
TRIREDRAFT_60635	α-1,2-mannosidase	TRIREDRAFT_60635	GH92	2430.0	0
TRIREDRAFT_69245	β-mannosidase	TRIREDRAFT_69245	GH2	270490	0
TRIREDRAFT_27395	α-1,6-mannanase	TRIREDRAFT_27395	GH76	4421.3	0
TRIREDRAFT_55733	α-1,2-mannosidase	TRIREDRAFT_55733	GH92	3495.6	0
TRIREDRAFT_103049	Polygalacturonase	TRIREDRAFT_103049	GH28	105360	0
TRIREDRAFT_123029	Copper/Zinc superoxide dismutase	Sod1	SOD_Cu/Zn	1306.3	0
TRIREDRAFT_123726	β-1,3-1,4-glucanase	TRIREDRAFT_123726	GH16	1598.1	0
TRIREDRAFT_124175	β-1,3-glucanase	TRIREDRAFT_124175	GH64	243580	0