

Table S6. The information of the identified substrates bound by GroEL1 and/or GroEL2**Table S6-1. Substrates of both GroEL1 and GroEL2**

Proteins Name	SwissProt ID	Mr(KDa)	PI	secondary feature
Putative lipoprotein	gi 108463713 gb ABF88898.1	11.4	6.03	
Hypothetical protein MXAN_2650	gi 108460953 gb ABF86138.1	11.9	11.4	
Hypothetical protein MXAN_4293	gi 108467769 gb ABF92954.1	16.4	6.29	
ATP synthase F1, delta subunit	gi 108467946 gb ABF93131.1	19.9	9.28	
Hypothetical protein MXAN_2526	gi 108463603 gb ABF88788.1	20.2	9.36	
Alkyl hydroperoxide reductase C	gi 108466489 gb ABF91674.1	20.7	5.97	$\alpha\beta$
Hypothetical protein MXAN_7407	gi 108467710 gb ABF92895.1	21.6	6.91	
Hypothetical protein MXAN_6187	gi 108467953 gb ABF93138.1	23.2	4.86	
Pilin	gi 108464954 gb ABF90139.1	23.4	5.25	
Vegetative protein	gi 108466760 gb ABF91945.1	23.6	8.54	
transporter, MotA/TolQ/ExbB proton channel family	gi 108467178 gb ABF92363.1	23.8	9.51	
Ribosomal protein L3	gi 108461186 gb ABF86371.1	24.5	10.03	
MotA/TolQ/ExbB proton channel family protein	gi 108465307 gb ABF90492.1	25.5	9.34	
MotA/TolQ/ExbB proton channel family protein	gi 108465592 gb ABF90777.1	25.9	5.59	
OmpA family protein	gi 108460955 gb ABF86140.1	26.3	4.76	$\alpha\beta+1\beta$
PspA/IM30 family protein(regulatory protein for phage-shock-protein operon)	gi 108464898 gb ABF90083.1	27.5	6.81	
Hypothetical protein MXAN_6976	gi 108462340 gb ABF87525.1	29.1	8.14	
3-deoxy-8-phosphoactulonate synthase	gi 108462440 gb ABF87625.1	30	7.05	$\alpha\beta$
Putative chemotaxis MotB protein	gi 108461220 gb ABF86405.1	31.8	9.09	$\alpha\beta$
Conserved hypothetical protein	gi 108462341 gb ABF87526.1	32	6.98	
ATP synthase F1, gamma subunit	gi 108461850 gb ABF87035.1	32.5	9.87	$\alpha\beta+1\alpha$
Putative lipoprotein	gi 108462639 gb ABF87824.1	33.1	5.32	
Hypothetical protein MXAN_4860	gi 108463957 gb ABF89142.1	33.5	4.56	
ATPase, AAA family	gi 108464238 gb ABF89423.1	34.5	5.05	$\alpha\beta$
Putative isocitrate dehydrogenase, NAD-dependent	gi 108461038 gb ABF86223.1	35.8	6.35	$\alpha\beta$
DNA-directed RNA polymerase, alpha subunit	gi 108461974 gb ABF87159.1	37.6	5.42	$\alpha\beta+1\alpha+1\beta$
Efflux transporter, RND family, MFP subunit	gi 108463443 gb ABF88628.1	38.7	9.01	
Putative lipoprotein	gi 108466690 gb ABF91875.1	39.1	5.69	$\alpha\beta$
Patatin-like phospholipase family protein	gi 108463726 gb ABF88911.1	39.3	8.24	$\alpha\beta$
GAF/GGDEF domain protein	gi 108461449 gb ABF86634.1	39.5	5.26	$2\alpha\beta$
4-hydroxyphenylpyruvate dioxygenase	gi 108464159 gb ABF89344.1	39.8	5.24	$2\alpha\beta$
Succinyl-CoA synthase, beta subunit	gi 108465422 gb ABF90607.1	41.2	6.08	$3\alpha\beta$
NAD dependent epimerase/dehydratase family	gi 108462464 gb ABF87649.1	41.9	6.35	$\alpha\beta$
Putative branched chain amino acid ABC transporter, periplasmic amino acid-binding protein	gi 108463874 gb ABF89059.1	42.1	6.66	$\alpha\beta$
Putative lipoprotein	gi 108464160 gb ABF89345.1	42.5	5.48	
Translation elongation factor Tu	gi 108467558 gb ABF92743.1	43.4	5.69	$\alpha\beta+1\beta$
Translation elongation factor Tu	gi 108462329 gb ABF87514.1	43.4	5.69	$\alpha\beta+1\beta$
Aminotransferase, class I and II family protein	gi 108463704 gb ABF88889.1	44.6	6.28	$2\alpha\beta$

Acetyl-CoA carboxylase, biotin carboxylase	gi 108461326 gb ABF86511.1	51.1	6.19	3αβ
OB-fold nucleic acid binding domain protein	gi 108464424 gb ABF89609.1	51.1	8.51	
Putative lipoprotein	gi 108461727 gb ABF86912.1	53.1	4.43	
Hypothetical protein MXAN_4180	gi 108466301 gb ABF91486.1	53.3	5.87	
5'-nucleotidase family protein	gi 108460777 gb ABF85962.1	53.6	6.64	2αβ
Propionyl-CoA carboxylase, alpha subunit	gi 108466413 gb ABF91598.1	55.3	8.82	3αβ
Putative lipoprotein	gi 108463316 gb ABF88501.1	56.9	4.88	
Peptidylprolyl cis-trans isomerase	gi 108462303 gb ABF87488.1	57.7	5.62	αβ
DSBA-like thioredoxin domain protein	gi 108461115 gb ABF86300.1	59.5	8.66	αβ
ATP synthase F1, alpha subunit	gi 108465919 gb ABF91104.1	60.1	8.96	αβ+1α+1β
Hypothetical protein MXAN_5743	gi 108467878 gb ABF93063.1	64.8	7.04	
Fe-S protein assembly chaperone HscA	gi 108464420 gb ABF89605.1	65.7	5	αβ+1β
Putative lipoprotein	gi 108464035 gb ABF89220.1	66.3	4.25	
Putative long-chain-fatty-acid-CoA ligase	gi 108462896 gb ABF88081.1	66.7	7.74	αβ+1β
Succinate dehydrogenase, flavoprotein subunit	gi 108465170 gb ABF90355.1	69.2	7.26	2αβ+1α
Putative peptidase, S37 family	gi 108464098 gb ABF89283.1	71.2	4.27	
Chaperone protein HtpG	gi 108463905 gb ABF89090.1	73.3	5.66	αβ
PBS lyase HEAT-like repeat protein	gi 108467788 gb ABF92973.1	73.7	5.64	
Prolyl endopeptidase precursor Pep	gi 108464609 gb ABF89794.1	76.8	6.55	αβ+1α
Peptidase, M13 (neprilysin) family	gi 108462397 gb ABF87582.1	78.5	6.57	2αβ+1α
Matrix-associated zinc metalloprotease FibA	gi 108465800 gb ABF90985.1	79.8	5.2	αβ+1α
ATP-dependent protease La	gi 108467702 gb ABF92887.1	90.4	5.85	αβ+1α
Preprotein translocase, SecA subunit	gi 108463299 gb ABF88484.1	106.3	5.94	3αβ+1α
Putative lipoprotein	gi 108465910 gb ABF91095.1	107.3	4.83	
Translation initiation factor IF-2	gi 108463647 gb ABF88832.1	111.9	9.22	2αβ+1β
TonB-dependent receptor	gi 108467528 gb ABF92713.1	122.4	5.84	
B12 binding domain/ArgK/methylmalonyl-CoA mutase family protein	gi 108464917 gb ABF90102.1	128.5	6.03	3αβ
DNA-directed RNA polymerase, beta' subunit	gi 108463590 gb ABF88775.1	156.3	7.54	1β
DNA-directed RNA polymerase, beta subunit	gi 108465184 gb ABF90369.1	157.5	5.56	αβ+3β
Conserved hypothetical protein	gi 108466233 gb ABF91418.1	164.5	5.51	

Table S6-2. Specific substrates of GroEL1

Proteins Name	SwissProt ID	Mr (KDa)	pI	Secondary feature
Hypothetical protein MXAN_3135	gi 108461349 gb ABF86534.1	13	12.04	
Transport energizing protein, ExbD/TolR family	gi 108466289 gb ABF91474.1	15.4	4.45	
Transport energizing protein, ExbD/TolR family	gi 108464717 gb ABF89902.1	15.4	4.54	
Hypothetical protein MXAN_6084	gi 108464051 gb ABF89236.1	16.6	5.51	
Hypothetical protein MXAN_0662	gi 108464316 gb ABF89501.1	18.7	8.78	
Hypothetical protein MXAN_5567	gi 108461837 gb ABF87022.1	18.8	4.79	
ATP synthase F0, B subunit	gi 108464094 gb ABF89279.1	19.4	9.18	
Vegetative protein	gi 108465050 gb ABF90235.1	19.4	10.38	
Acetyl-CoA carboxylase, biotin carboxyl carrier protein	gi 108467252 gb ABF92437.1	21	5.98	1 β
Hypothetical protein MXAN_5512	gi 108467881 gb ABF93066.1	21.5	5.51	
Cytochrome c family protein	gi 108464492 gb ABF89677.1	22	6.43	1 α
Putative lipoprotein	gi 108461894 gb ABF87079.1	22	5.14	
Putative lipoprotein	gi 108465829 gb ABF91014.1	23.1	4.34	
Ribosomal 5S rRNA E-loop binding protein Ctc/L25/TL5	gi 108467517 gb ABF92702.1	23.3	9.64	2 β
Conserved hypothetical protein	gi 108467759 gb ABF92944.1	23.4	5.3	
Conserved hypothetical protein	gi 108463349 gb ABF88534.1	23.6	10.88	
Putative cytochrome c	gi 108461323 gb ABF86508.1	24.6	6.48	
Putative lipoprotein MlpA	gi 108465162 gb ABF90347.1	24.6	4.41	
Ribosomal protein S3	gi 108465909 gb ABF91094.1	24.8	10.06	2 $\alpha\beta$
Hypothetical protein MXAN_6660	gi 108467412 gb ABF92597.1	25.3	4.51	
Hypothetical protein MXAN_5716	gi 108461439 gb ABF86624.1	25.8	8.82	
Glycosyl transferase, group 2 family protein	gi 108466337 gb ABF91522.1	26	6.44	$\alpha\beta$
Oxidoreductase, short chain dehydrogenase/reductase family	gi 108467801 gb ABF92986.1	26.3	8.71	$\alpha\beta$
Circadian phase modifier CpmA-like protein	gi 108465659 gb ABF90844.1	26.3	9.39	
Putative TonB protein	gi 108466663 gb ABF91848.1	26.5	5.88	
Peptidyl-prolyl cis-trans isomerase, FKBP-type	gi 108466899 gb ABF92084.1	27.3	6.77	$\alpha\beta$
Hypothetical protein MXAN_5530	gi 108464256 gb ABF89441.1	27.5	9.86	
Conserved hypothetical protein TIGR00266	gi 108462992 gb ABF88177.1	27.9	5.11	
D-lysine 5,6-aminomutase, beta subunit	gi 108460697 gb ABF85882.1	28.7	8.42	2 $\alpha\beta$
Hypothetical protein MXAN_0572	gi 108467148 gb ABF92333.1	29.2	4.69	
Putative Flp pilus assembly protein CpaB	gi 108462905 gb ABF88090.1	29.5	6.23	
Hypothetical protein MXAN_5235	gi 108465621 gb ABF90806.1	31.5	9.99	
Hypothetical protein MXAN_3556	gi 108462612 gb ABF87797.1	32.5	5.43	
Kinase, pfkB family	gi 108467360 gb ABF92545.1	33.9	6.12	$\alpha\beta$
Putative cysteine synthase La	gi 108460810 gb ABF85995.1	34.1	6.91	$\alpha\beta$
Hypothetical protein MXAN_5056	gi 108465950 gb ABF91135.1	34.1	9.75	
NAD-dependent epimerase/dehydratase family protein	gi 108461556 gb ABF86741.1	34.8	6.25	$\alpha\beta$
NAD dependent epimerase/dehydratase family protein	gi 108464298 gb ABF89483.1	35.7	9.54	$\alpha\beta$
Conserved hypothetical protein	gi 108466780 gb ABF91965.1	36.6	6.57	
GDP-mannose 4,6-dehydratase	gi 108464244 gb ABF89429.1	36.8	6.57	2 $\alpha\beta$

Hypothetical protein MXAN_7193	gi 108462848 gb ABF88033.1	37.2	10.51	
Cytochrome c oxidase, subunit II	gi 108465540 gb ABF90725.1	39.4	5.93	1 β
Efflux transporter, HAE1 family, MFP subunit	gi 108465925 gb ABF91110.1	39.7	9.32	1 β
efflux transporter, RND family, MFP subunit	gi 108462604 gb ABF87789.1	41.2	9.09	
Putative outer membrane protein P1	gi 108465243 gb ABF90428.1	42.1	5.83	1 β
Hypothetical protein MXAN_6152	gi 108467500 gb ABF92685.1	42.5	10.21	
Conserved hypothetical protein	gi 108460963 gb ABF86148.1	43.3	8.8	
Putative serine/threonine protein kinase	gi 108460939 gb ABF86124.1	43.6	9.63	1 α
Frizzy aggregation protein FrzCD	gi 108461945 gb ABF87130.1	43.6	5.17	1 α
Transcription termination factor Rho	gi 108464434 gb ABF89619.1	47	6.54	$\alpha\beta+1\beta$
Conserved hypothetical protein	gi 108467288 gb ABF92473.1	47.5	5.1	
Peptidase, S1C (protease Do) subfamily	gi 108460906 gb ABF86091.1	47.7	9.11	2 β
Putative glutamate-cysteine ligase	gi 108462861 gb ABF88046.1	49.1	6	
Pyruvate dehydrogenase complex , E2 component, dihydrolipoamide acetyltransferase	gi 108463562 gb ABF88747.1	55.1	9.23	$\alpha\beta+1\beta$
Putative lipoprotein	gi 108464216 gb ABF89401.1	57.6	4.99	
Endonuclease/exonuclease/phosphatase family protein	gi 108465412 gb ABF90597.1	61	4.75	
Putative ABC transporter, permease/ATP-binding protein	gi 108461711 gb ABF86896.1	63.2	9.17	$\alpha\beta+1\alpha$
Hypothetical protein MXAN_1792	gi 108467622 gb ABF92807.1	63.8	5.57	
Putative lipoprotein	gi 108465712 gb ABF90897.1	64.3	8.35	
Chaperone protein DnaK	gi 108464899 gb ABF90084.1	65.3	5.15	3 $\alpha\beta+1\alpha$
V-type H(+)-translocating pyrophosphatase	gi 108463776 gb ABF88961.1	69.7	5.63	
FHA domain protein	gi 108463173 gb ABF88358.1	77.5	9.81	
Conserved domain protein	gi 108463858 gb ABF89043.1	79.1	8.14	
Putative alkaline phosphatase	gi 108461003 gb ABF86188.1	81.4	5.06	1 α
ATP-dependent helicase, DEAD/DEAH-box family	gi 108467215 gb ABF92400.1	89	6.28	$\alpha\beta$
Sensor histidine kinase/response regulator CheA4	gi 108465504 gb ABF90689.1	89.4	5.88	2 $\alpha\beta+1\beta$
ATP-dependent protease	gi 108467808 gb ABF92993.1	91.8	9.09	$\alpha\beta+\alpha$
General secretion pathway protein D	gi 108461310 gb ABF86495.1	91.8	5.58	
Sensor histidine kinase/response regulator	gi 108467866 gb ABF93051.1	92	5.93	2 $\alpha\beta$
ATP-dependent helicase HrpB	gi 108465444 gb ABF90629.1	93.4	8.79	$\alpha\beta$
Type IV pilus secretin PilQ	gi 108463309 gb ABF88494.1	95.7	9.49	
DNA polymerase	gi 108463657 gb ABF88842.1	99.6	6.16	3 $\alpha\beta+2\alpha$
TonB-dependent receptor	gi 108461839 gb ABF87024.1	103.4	5.98	
RND transporter, hydrophobe/amphiphile efflux-1 (HAE1) family	gi 108461042 gb ABF86227.1	111.5	5.28	2 $\alpha\beta+2\alpha$
Putative molybdopterin oxidoreductase, iron-sulfur binding subunit	gi 108466940 gb ABF92125.1	116.3	6.18	$\alpha\beta$
Polyketide synthase type	gi 108462423 gb ABF87608.1	150.2	6.01	2 $\alpha\beta$
Putative long-chain-fatty-acid CoA ligase	gi 108462818 gb ABF88003.1	162.3	6.6	1 β
Non-ribosomal peptide synthase MxaA	gi 108465274 gb ABF90459.1	163	6.07	2 $\alpha\beta+1\alpha+1\beta$
Rhs family protein	gi 108466825 gb ABF92010.1	194	5.37	1 β
Polyketide synthase type I	gi 108464516 gb ABF89701.1	199.3	6	2 $\alpha\beta$
Sensor histidine kinase/response regulator	gi 108460885 gb ABF86070.1	212.7	5.49	2 $\alpha\beta$
Non-ribosomal peptide synthase/polyketide synthase	gi 108467361 gb ABF92546.1	324.1	5.86	3 $\alpha\beta$
Adventurous gliding motility protein AgmK	gi 108461297 gb ABF86482.1	421.5	5.18	1 α

Table S6-3. Specific substrates of GroEL2

Proteins Name	SwissProt ID	Mr (kDa)	pI	Secondary feature
Hypothetical protein MXAN_1734	gi 108464654 gb ABF89839.1	5.9	11.6	
Hypothetical protein MXAN_2720	gi 108466490 gb ABF91675.1	10.5	8.18	
Hypothetical protein MXAN_4368	gi 108466097 gb ABF91282.1	14.5	10.28	
Hypothetical protein MXAN_5286	gi 108460772 gb ABF85957.1	18.1	10.55	
gliding motility protein MglA	gi 108462799 gb ABF87984.1	22	8.94	$\alpha\beta$
DnaJ domain protein	gi 108466045 gb ABF91230.1	24.8	8.47	1α
Vegetative protein	gi 108463008 gb ABF88193.1	27.7	11.43	
2-oxo acid dehydrogenase acyltransferase catalytic domain protein	gi 108463708 gb ABF88893.1	32	9.21	$\alpha\beta$
Pyruvate dehydrogenase complex, E1 component, pyruvate dehydrogenase, beta subunit	gi 108462490 gb ABF87675.1	35.5	5.1	$2\alpha\beta$
Rod shape-determining protein MreB	gi 108465738 gb ABF90923.1	36.5	5.26	$3\alpha\beta$
Acyl-CoA dehydrogenase	gi 108460671 gb ABF85856.1	41	5.86	$2\alpha+1\beta$
Acetyl-CoA acetyltransferase family protein	gi 108466785 gb ABF91970.1	41.6	5.95	$\alpha\beta$
Type IV pilus biogenesis protein PilM	gi 108463407 gb ABF88592.1	42.2	4.82	$\alpha\beta$
Conserved domain protein	gi 108466054 gb ABF91239.1	42.5	6.68	
Putative aspartate aminotransferase	gi 108464559 gb ABF89744.1	42.9	6.78	$2\alpha\beta$
Pyruvate dehydrogenase complex, E1 component, pyruvate dehydrogenase, alpha subunit	gi 108465752 gb ABF90937.1	43.7	5.56	$\alpha\beta$
Isocitrate dehydrogenase, NADP-dependent	gi 108463607 gb ABF88792.1	47.3	6.64	$\alpha\beta$
Peptidase, M16 (pitriysin) family	gi 108464326 gb ABF89511.1	51.1	8.4	$\alpha\beta$
ATP synthase F1, beta subunit	gi 108463470 gb ABF88655.1	51.8	5.02	$\alpha\beta+1\alpha+1\beta$
Protein transporter, outer bacterial membrane secretin (secretin) family	gi 108466805 gb ABF91990.1	51.8	9.12	
Hypothetical protein MXAN_5216	gi 108462406 gb ABF87591.1	52.4	10.19	$\alpha\beta$
Sigma-54 dependent DNA-binding response regulator Nla19	gi 108467699 gb ABF92884.1	53.2	6.56	$2\alpha\beta+1\alpha$
Glycerol kinase	gi 108466269 gb ABF91454.1	53.8	9.19	$\alpha\beta$
Glutamate--ammonia ligase	gi 108463107 gb ABF88292.1	54.4	6.37	$2\alpha\beta$
Hypothetical protein MXAN_2659	gi 108466474 gb ABF91659.1	55.6	5.49	
Peptidase, M16 (pitriysin) family	gi 108466919 gb ABF92104.1	58.7	5.93	$\alpha\beta$
Poly(A) polymerase	gi 108464894 gb ABF90079.1	60	4.82	$\alpha\beta$
Conserved hypothetical protein	gi 108466266 gb ABF91451.1	62	8.15	$\alpha\beta$
Type IV-A pilus assembly ATPase PilB	gi 108464603 gb ABF89788.1	62.5	5.22	$2\alpha\beta$
Phosphoenolpyruvate carboxykinase (GTP)	gi 108461634 gb ABF86819.1	66.1	6.26	$2\alpha\beta+1\beta$
HAMP domain/GAF domain/GGDEF domain protein	gi 108467379 gb ABF92564.1	70	6.07	$2\alpha\beta$
Hypothetical protein MXAN_6253	gi 108465637 gb ABF90822.1	72	9.03	
Putative acyl-CoA dehydrogenase	gi 108462001 gb ABF87186.1	72.7	6.7	$1\alpha+1\beta$
Peptidase, M3 (thimet oligopeptidase) family	gi 108461854 gb ABF87039.1	72.9	6.12	$\alpha\beta+1\alpha$
Tetratricopeptide repeat protein	gi 108461871 gb ABF87056.1	76	8.82	
Methionyl-tRNA synthetase	gi 108466716 gb ABF91901.1	77.3	5.98	$\alpha\beta+1\alpha+3\beta$
Excinuclease ABC, B subunit	gi 108463428 gb ABF88613.1	79.2	5.58	$\alpha\beta$
3-hydroxyacyl-CoA dehydrogenase	gi 108464934 gb ABF90119.1	86.4	6.85	$2\alpha\beta$
Penicillin acylase family protein	gi 108464049 gb ABF89234.1	88.9	5.14	$\alpha\beta+2\alpha$
Hypothetical protein MXAN_4986	gi 108466839 gb ABF92024.1	108.7	6.02	

DNA polymerase III, alpha subunit	gi 108465847 gb ABF91032.1	111.3	7.22	
Carbamoyl-phosphate synthase, large subunit	gi 108467618 gb ABF92803.1	118.8	5.48	3 $\alpha\beta$ +1 α
Putative non-ribosomal peptide synthetase	gi 108461374 gb ABF86559.1	130.2	5.65	$\alpha\beta$ +1 α +1 β
Conserved domain protein	gi 108466076 gb ABF91261.1	132.2	8.49	$\alpha\beta$
Polyketide synthase type	gi 108463875 gb ABF89060.1	231.9	5.76	3 $\alpha\beta$
Non-ribosomal peptide synthetase	gi 108467458 gb ABF92643.1	495.2	5.66	3 $\alpha\beta$ +1 α +1 β

Table S6-4. Non-specific substrates of GroEL

Proteins Name	SwissProt ID
translation elongation factor Tu	gi 108467558 gb ABF92743.1
conserved hypothetical protein	gi 108464213 gb ABF89398.1
ribosomal protein S1	gi 108467641 gb ABF92826.1
ribosomal protein S2	gi 108462257 gb ABF87442.1
ribosomal protein L5	gi 108461461 gb ABF86646.1
ribosomal protein L2	gi 108463768 gb ABF88953.1
ribosomal protein L4	gi 108465431 gb ABF90616.1
ribosomal protein L10	gi 108466139 gb ABF91324.1
ribosomal protein S12	gi 108462449 gb ABF87634.1
ribosomal protein S4	gi 108462544 gb ABF87729.1
hypothetical protein MXAN_7407	gi 108467710 gb ABF92895.1
alkyl hydroperoxide reductase C	gi 108466489 gb ABF91674.1
ATP synthase F1, beta subunit	gi 108463470 gb ABF88655.1
ribosomal protein S4	gi 108462544 gb ABF87729.1
conserved hypothetical protein	gi 108464297 gb ABF89482.1
ribosomal protein L3	gi 108461186 gb ABF86371.1
ribosomal protein S8	gi 108463341 gb ABF88526.1
ribosomal protein L19	gi 108466655 gb ABF91840.1
ribosomal protein L18	gi 108463024 gb ABF88209.1
ribosomal protein L9	gi 108464695 gb ABF89880.1
ribosomal protein L15	gi 108462535 gb ABF87720.1
ribosomal protein S7	gi 108467649 gb ABF92834.1