GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
BL21 (DE3) Chemically Competent E. coli Cells (CC-103)	≥5 x 10^5 CFU/µg	– Routine protein expression from non-T7 vectors – For routine T7 expression – Deficient in Lon and OmpT proteases/B strain – Resistant to phage T1 (*fhuA2*)
BL21 (DE3) Electrocompetent E. coli Cells (CC-204)	≥1 x 10^8 CFU/µg	– Protein expression and complex library expression – For routine T7 expression – Deficient in Lon and OmpT proteases – Resistant to phage T1 (*fhuA2*) – B strain
BL21 Chemically Competent E. coli Cells (CC-102)	≥1 x 10^6 CFU/µg	– Routine protein expression from non-T7 vectors – Deficient in Lon and OmpT proteases – Resistant to phage T1 *(fhuA2)*

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
BL21 (DE3) pLysS Chemically Competent E. coli Cells (CC-123)	≥4 x 10^7 CFU/µg	– Tightly regulated T7 protein expression – Ideal for toxic or leaky T7-driven constructs – pLysS-expressed T7 lysozyme suppresses basal expression – Deficient in Lon and OmpT proteases / B strain – Resistant to phage T1 (fhuA2)
CJ236 Chemically Competent E. Coli Cells (CC-151)	≥1 x 10^4 CFU/µg	– Kunkel method of site-directed mutagenesis – dUTPase deficiency – Uracil-DNA glycosylase deficiency – Thiamine auxotrophy

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
CJ236 Electrocompetent E. Coli Cells (CC-251)	≥1 x 10^9 CFU/µg	– Kunkel method of site-directed mutagenesis – dUTPase deficiency – Uracil-DNA glycosylase deficiency – Thiamine auxotrophy
DL39 (DE3) Chemically Competent E. coli Cells (CC-104)	≥1 x 10^7 CFU/µg	– Transformation and protein expression – Deficient in aromatic, branched-chain and aspartate transaminases – For routine T7 expression

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
GB10B-Pro™ Electrocompetent E. coli Cells (CC-201)	≥1 x 10^9 CFU/µg	– Cloning synthetic bio-applications, BAC cloning, assembling large and multi-DNA fragments
GB10B™ Chemically Competent E. coli Cells (CC-100)	≥8.2 x 10^6 CFU/µg	– Cloning and subcloning – Blue/white screening (ϕ80lacZΔM15) – *mcrA mcRBC*, and *mrr* deletion for cloning of methylcytosine and methyladenine-containing DNA – Endonuclease deficient (*endA1*)
GB10B™ Electrocompetent E. coli Cells (CC-200)	≥2 x 10^8 CFU/µg	– Blue/white screening (ϕ80lacZΔM15) – *mcrA mcRBC*, and *mrr* deletion for cloning of methylcytosine and methyladenine-containing DNA – High transformation efficiency

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
GB5-alpha™ Chemically Competent E. coli Cells (CC-101)	≥1 x 10^8 CFU/µg	– Cloning and subcloning – Blue/white screening (ϕ80lacZΔM15) – High-efficiency transformation of recombinant DNA – Cloning guide RNAs (gRNAs) for CRISPR applications – Amplification of plasmids after site-directed mutagenesis – Propagation of synthetic biology constructs and genetic circuits
GB5-alpha™ Electrocompetent E. coli Cells (CC-203)	≥5 x 10^8 CFU/µg	– High efficiency transformation for many applications including cloning and subcloning – Increased plasmid yield and improved plasmid quality (*endA1* and *recA1* mutations)
HB101 Chemically Competent E. coli Cells (CC-150)	≥7 x 10^6 CFU/µg	– Cloning and subcloning – non Blue/white screening – Prevents cleavage of cloned DNA by endogenous restriction enzymes (or the hsdS20(rB-mB-) restriction minus genotype) – Contain the recA13 mutation that minimizes recombination and helps insert stability

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
JM109 Chemically Competent E. coli Cells (CC-114)	≥6 x 10^5 CFU/µg	– Cloning and subcloning – Library construction – Plasmid isolation – Blue-white screening
RR1 Chemically Competent E. coli Cells (CC-113)	≥3 x 10^7 CFU/µg	– Cloning and subcloning – recA+ derivative of the HB101 strain
TG1 Phage Display Electrocompetent Cells (CC-205)	≥1 x 10^9 CFU/µg	– Protein expression – Amber suppressor strain (*supE*) – Phage display library screening

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
AGL-1 Agrobacterium Chemically Competent Cells (CC-106)	≥ 4 x 10^4 CFU/µg	– High transformation efficiency – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance
AGL-1 Agrobacterium Electrocompetent Cells (CC-208)	≥5 x 10^7 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance
AGL-1 (pSoup) Agrobacterium Electrocompetent Cells (CC-218)	≥2 x 10^8 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
AGL-1 (pSoup) Agrobacterium Chemically Competent Cells (CC-116)	≥3 x 10^3 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – Stabilizes recombinant plasmids (*recA* mutation) – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance
AGL-1 (pSoup-P19) Agrobacterium Electrocompetent Cells (CC-228)	≥1 x 10^8 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – Stabilizes recombinant plasmids (*recA* mutation) – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance
AGL-1 (pSoup-P19) Agrobacterium Chemically Competent Cells (CC-126)	≥2 x 10^3 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – Stabilizes recombinant plasmids (*recA* mutation) – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
AGL-1 (pSuperAgro™ v4) Agrobacterium Electrocompetent Cells (CC-624)	≥1 x 10^7 CFU/µg	– High transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – cDNA or gDNA library construction – Stabilizes recombinant plasmids (*recA* mutation) – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance
AGL-1 (pSuperAgro™ v4) Agrobacterium Chemically Competent Cells (CC-524)	≥1 x 10^3 CFU/µg	– High transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – cDNA or gDNA library construction – Stabilizes recombinant plasmids (*recA* mutation) – T-DNA binary system with the Ti plasmid pTiBO542 – Rifampicin and carbenicillin resistance
C58C1 Agrobacterium Chemically Competent Cells (CC-109)	≥ 1 x 10^5 CFU/µg	– Very high transformation efficiency – T-DNA binary system with the Ti plasmid pTiC58 – Rifampicin resistance and streptomycin resistance – *Agrobacterium*-mediated transformation

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
C58C1 Agrobacterium Electrocompetent Cells (CC-240)	≥1 x 10^7 CFU/µg	– Very high transformation efficiency – T-DNA binary system with the Ti plasmid pTiC58 – Rifampicin resistance and streptomycin resistance – *Agrobacterium*-mediated transformation
C58C1 (pSuperAgro™ v4) Agrobacterium Electrocompetent Cells (CC-654)	≥1 x 10^7 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with the Ti plasmid pTiC58 – Rifampicin resistance and streptomycin resistance – *Agrobacterium*-mediated transformation
C58C1 (pSuperAgro™ v4) Agrobacterium Chemically Competent Cells (CC-554)	≥1 x 10^3 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with the Ti plasmid pTiC58 – Rifampicin resistance and streptomycin resistance – *Agrobacterium*-mediated transformation
EHA105 Agrobacterium Chemically Competent Cells (CC-108)	≥ 5 x 10^4 CFU/µg	– High transformation efficiency – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
EHA105 Agrobacterium Electrocompetent Cells (CC-225)	≥1.6 x 10^8 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance (pTiBo542DT-DNA)
Auxo-Agro® EHA105 Electrocompetent Cells (CC-268)	≥1.6 x 10^8 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – Rifampicin resistance (pTiBo542DT-DNA)
Auxo-Agro® EHA105 Chemically Competent Cells (CC-168)	≥1 x 10^4 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – Rifampicin resistance (pTiBo542DT-DNA)

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
EHA105 (pSoup) Agrobacterium ElectroCompetent Cells (CC-235)	≥4 x 10^8 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance (pTiBo542DT-DNA)
EHA105 (pSoup) Agrobacterium Chemically Competent Cells (CC-118)	≥5 x 10^3 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance (pTiBo542DT-DNA)
EHA105 (pSoup-P19) Agrobacterium ElectroCompetent Cells (CC-245)	≥3 x 10^8 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance (pTiBo542DT-DNA)

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
EHA105 (pSoup-P19) Agrobacterium Chemically Competent Cells (CC-128)	≥2 x 10^3 CFU/µg	– High transformation efficiency – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance (pTiBo542DT-DNA)
EHA105 (pSuperAgro™ v4tet) Agrobacterium Electrocompetent Cells (CC-634)	≥1 x 10^7 CFU/µg	– High transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance (pTiBo542DT-DNA)
EHA105 (pSuperAgro™ v4tet) Agrobacterium Chemically Competent Cells (CC-534)	≥1 x 10^3 CFU/µg	– High transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – cDNA or gDNA library construction – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pEHA105(pTiBo542DT-DNA) – Rifampicin resistance (pTiBo542DT-DNA)

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
GV3101 Agrobacterium Electrocompetent Cells (CC-207)	≥2 x 10^8 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with the Ti plasmid pMP90(pTiC58DT-DNA) – Rifampicin resistance and gentamicin resistance – *Agrobacterium*-mediated transformation
GV3101 Agrobacterium Chemically Competent Cells (CC-105)	≥ 6 x 10^4 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with Ti plasmid pTiC58DT-DNA – Rifampicin resistance and gentamicin resistance – *Agrobacterium*-mediated transformation
GV3101 (pSoup) Agrobacterium Electrocompetent Cells (CC-217)	≥ 8 x 10^7 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with Ti plasmid pTiC58DT-DNA – Rifampicin resistance and gentamicin resistance – *Agrobacterium*-mediated transformation

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
GV3101 (pSoup) Agrobacterium Chemically Competent Cells (CC-115)	≥ 1.5 x 10^3 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with Ti plasmid pTiC58DT-DNA – Rifampicin resistance and gentamicin resistance – *Agrobacterium*-mediated transformation
GV3101 (pSoup-P19) Agrobacterium Electrocompetent Cells (CC-227)	≥ 1 x 10^8 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with Ti plasmid pMP90 (pTiC58DT-DNA) – Rifampicin resistance, tetracycline resistance and gentamicin resistance – *Agrobacterium*-mediated transformation
GV3101 (pSoup-P19) Agrobacterium Chemically Competent Cells (CC-125)	≥ 3 x 10^3 CFU/µg	– Very high transformation efficiency – cDNA or gDNA library construction – T-DNA binary system with Ti plasmid pMP90 (pTiC58DT-DNA) – Rifampicin resistance, tetracycline resistance and gentamicin resistance – *Agrobacterium*-mediated transformation

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
GV3101 (pSuperAgro™ v4tet) Agrobacterium Electrocompetent Cells (CC-614)	≥ 1 x 10^7 CFU/µg	– Very high transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – cDNA or gDNA library construction – T-DNA binary system with Ti plasmid pMP90 (pTiC58DT-DNA) – Rifampicin resistance, tetracycline resistance and gentamicin resistance – *Agrobacterium*-mediated transformation
GV3101 (pSuperAgro™ v4tet) Agrobacterium Chemically Competent Cells (CC-514)	≥ 1 x 10^3 CFU/µg	– Very high transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – cDNA or gDNA library construction – T-DNA binary system with Ti plasmid pMP90 (pTiC58DT-DNA) – Rifampicin resistance, tetracycline resistance and gentamicin resistance – *Agrobacterium*-mediated transformation
LBA4404 Agrobacterium Chemically Competent Cells (CC-107)	≥ 1 x 10^4 CFU/µg	– High transformation efficiency – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pAL4404 – Rifampicin resistance

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
LBA4404 Agrobacterium Electrocompetent Cells (CC-220)	≥4 x 10^6 CFU/µg	– High transformation efficiency – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pAL4404 – Rifampicin resistance
Auxo-Agro® LBA4404 Electrocompetent Cells (CC-267)	≥4 x 10^6 CFU/µg	– High transformation efficiency – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pAL4404 – Rifampicin resistance
Auxo-Agro® LBA4404 Chemically Competent Cells (CC-167)	≥1 x 10^4 CFU/µg	– High transformation efficiency – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pAL4404 – Rifampicin resistance
LBA4404 (pSuperAgro™ v4) Agrobacterium Electrocompetent Cells (CC-644)	≥1 x 10^7 CFU/µg	– High transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pAL4404 – Rifampicin resistance

GoldBio Competent Cells Characteristics and Applications

Products	*Transformation Efficiency*	*Applications and Characteristics*
LBA4404 (pSuperAgro™ v4) Agrobacterium Chemically Competent Cells (CC-544)	≥1 x 10^3 CFU/µg	– High transformation efficiency – AcdS and GabT activity, driven by a single lac promotor – *Agrobacterium*-mediated transformation – T-DNA binary system with the Ti plasmid pAL4404 – Rifampicin resistance