

# Competent cell selection guide

An overview of competent cells listed by recommended applications

## Ordering information

Product	Quantity	Transformation efficiency*	Chemically (C) or electro (E) competent	T1 phage resistance ( <i>tonA</i> )	Reduces recombination events ( <i>recA</i> )	Improves quality of miniprep plasmid DNA ( <i>endA1</i> )	Blue/white screening ( <i>lacZΔM15</i> )	Cat. No.
<b>Routine cloning</b>								
One Shot TOP10	20 x 50 µL	>1 x 10 <sup>9</sup>	C	—	•	•	•	C4040-03
One Shot MAX Efficiency DH5α T1 <sup>R</sup>	20 x 50 µL	>1 x 10 <sup>9</sup>	C	•	•	•	•	12297-016
MAX Efficiency DH5α T1 <sup>R</sup>	5 x 200 µL	>1 x 10 <sup>9</sup>	C	•	•	•	•	12034-013
MAX Efficiency DH5α	5 x 200 µL	>1 x 10 <sup>9</sup>	C	—	•	•	•	18258-012
One Shot OmniMAX 2 T1 <sup>R</sup>	20 x 50 µL	>5 x 10 <sup>9</sup>	C	•	•	•	•	C8540-03
One Shot MAX Efficiency DH10B T1 <sup>R</sup>	20 x 50 µL	>1 x 10 <sup>9</sup>	C	•	•	•	•	12297-016
MAX Efficiency DH10B	5 x 200 µL	>1 x 10 <sup>9</sup>	C	—	•	•	•	18297-010
Library Efficiency DH5α	5 x 200 µL	>1 x 10 <sup>8</sup>	C	—	•	•	•	18263-012
Subcloning Efficiency DH5α	4 x 500 µL	>1 x 10 <sup>8</sup>	C	—	•	•	•	18265-017
<b>Fast growth</b>								
One Shot Mach1 T1 <sup>R</sup>	20 x 50 µL	>1 x 10 <sup>9</sup>	C	•	•	•	•	C8620-03
<b>Medium- to high-throughput applications</b>								
MultiShot StripWell TOP10	12 x 8-well strips	>1 x 10 <sup>8</sup>	C	—	•	•	•	C4096-01
MultiShot StripWell Mach1 T1 <sup>R</sup>	12 x 8-well strips	>1 x 10 <sup>8</sup>	C	•	•	•	•	C8696-01
MultiShot StripWell DH5α T1 <sup>R</sup>	12 x 8-well strips	>1 x 10 <sup>8</sup>	C	•	•	•	•	C4496-01
MultiShot StripWell Stb13	12 x 8-well strips	>1 x 10 <sup>7</sup>	C	—	•	—	—	C7396-01
MultiShot StripWell BL21 Star (DE3)	12 x 8-well strips	>1 x 10 <sup>7</sup>	C	—	—	—	—	C6096-01
<b>High-throughput applications</b>								
MultiShot FlexPlate TOP10	1 x 96-well plate	>1 x 10 <sup>8</sup>	C	—	•	•	•	C40812-01
MultiShot FlexPlate Mach1 T1 <sup>R</sup>	1 x 96-well plate	>1 x 10 <sup>8</sup>	C	•	•	•	•	C86812-01
MultiShot FlexPlate DH5α T1 <sup>R</sup>	1 x 96-well plate	>1 x 10 <sup>8</sup>	C	•	•	•	•	C44812-01
MultiShot FlexPlate Stb13	1 x 96-well plate	>1 x 10 <sup>7</sup>	C	—	•	—	—	C73812-01
MultiShot FlexPlate DH10B T1 <sup>R</sup>	1 x 96-well plate	>1 x 10 <sup>8</sup>	C	•	•	•	•	C64812-01
MultiShot FlexPlate OmniMAX 2 T1 <sup>R</sup>	1 x 96-well plate	>5 x 10 <sup>8</sup>	C	•	•	•	•	C85812-01
MultiShot TOP10	5 x 96-well plates	>1 x 10 <sup>8</sup>	C	—	•	•	•	C400-05
<b>High-efficiency transformation and library construction</b>								
MegaX DH10B T1 <sup>R</sup> Electrocomp	5 x 100 µL	>3 x 10 <sup>10</sup>	E	•	•	•	•	C6400-03
One Shot TOP10 Electrocomp	20 x 50 µL	>1 x 10 <sup>10</sup>	E	—	•	•	•	C4040-52
One Shot OmniMAX 2 T1 <sup>R</sup>	20 x 50 µL	>5 x 10 <sup>9</sup>	C	•	•	•	•	C8540-03
ElectroMAX DH10B T1 <sup>R</sup>	5 x 100 µL	>1 x 10 <sup>10</sup>	E	•	•	•	•	12033-015

## Ordering information (continued)

Product	Quantity	Transformation efficiency*	Chemically (C) or electro (E) competent	T1 phage resistance ( <i>tonA</i> )	Reduces recombination events ( <i>recA</i> )	Improves quality of miniprep plasmid DNA ( <i>endA1</i> )	Blue/white screening ( <i>lacZΔM15</i> )	Cat. No.
ElectroMAX DH10B	5 x 100 μL	>1 x 10 <sup>10</sup>	E	—	•	•	•	18290-015
ElectroMAX DH5α-E	5 x 100 μL	>1 x 10 <sup>10</sup>	E	—	•	•	•	11319-019
<b>Unstable DNA cloning</b>								
One Shot Stbl3	20 x 50 μL	>1 x 10 <sup>8</sup>	C	—	•	—	—	C7373-03
ElectroMAX Stbl4	5 x 100 μL	>5 x 10 <sup>9</sup>	E	—	•	•	•	11635-018
MAX Efficiency Stbl2	5 x 200 μL	>1 x 10 <sup>9</sup>	C	—	•	•	—	10268-019
<b>Protein expression</b>								
One Shot BL21 Star (DE3)	20 x 50 μL	>1 x 10 <sup>8</sup>	C	—	—	—	—	C6010-03
One Shot BL21 Star (DE3)pLysS	20 x 50 μL	>1 x 10 <sup>8</sup>	C	—	—	—	—	C6020-03
One Shot BL21-A1	20 x 50 μL	>1 x 10 <sup>8</sup>	C	—	—	—	—	C6070-03
One Shot BL21(DE3)	20 x 50 μL	>1 x 10 <sup>8</sup>	C	—	—	—	—	C6000-03
One Shot BL21(DE3)pLysS	20 x 50 μL	>1 x 10 <sup>8</sup>	C	—	—	—	—	C6060-03
<b>ssDNA propagation (contains F' episome)</b>								
ElectroMAX DH12S	5 x 100 μL	>1 x 10 <sup>10</sup>	E	—	•	—	•	18312-017
One Shot TOP10F'	20 x 50 μL	>1 x 10 <sup>9</sup>	C	—	•	•	•	C3030-03
MAX Efficiency DH5αF'IQ	5 x 200 μL	>3 x 10 <sup>8</sup>	C	—	•	•	•	18288-019
ElectroMAX Stbl4	5 x 100 μL	>5 x 10 <sup>9</sup>	E	—	•	•	—	11635-018
One Shot OmniMAX T1 <sup>R</sup>	20 x 50 μL	>5 x 10 <sup>9</sup>	C	•	•	•	•	C8540-03
<b>Unmethylated DNA preparation</b>								
One Shot INV110	20 x 50 μL	>1 x 10 <sup>8</sup>	C	•	—	•	•	C7171-03
<b>Bacmid creation</b>								
MAX Efficiency DH10Bac	5 x 100 μL	>1 x 10 <sup>8</sup>	C	—	—	—	•	10361-012
<b>Cre-lox recombination</b>								
One Shot PIR1	10 x 50 μL	>1 x 10 <sup>9</sup>	C	—	•	•	—	C1010-10
One Shot PIR2	10 x 50 μL	>1 x 10 <sup>8</sup>	C	—	•	•	—	C1111-10
<b>ccdB vector propagation</b>								
One Shot <i>ccdB</i> Survival 2 T1 <sup>R</sup>	10 x 50 μL	>1 x 10 <sup>9</sup>	C	•	•	•	•	A10460

\* Transformants/μg of pUC19 DNA.

For a complete listing of all of Invitrogen™ competent cell strains, go to [thermofisher.com/compcells](https://www.thermofisher.com/compcells)

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