

## Escherichia coli Strains and NIH Guidelines Guidance

The National Institutes of Health (NIH) Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines) establishes that with some exceptions, experimental use of *Escherichia coli* (*E. coli*) K-12 strain and its derivatives are exempt from the requirements of the NIH Guidelines.

Below is a list of some commonly used strains of *E. coli*, and the NIH Guidelines category applicable to those strains.

The following *E. coli* laboratory strains are K12 or derived from K-12 and therefore most research utilizing these strains is exempt from the NIH Guidelines. **(Risk Group 1, Exempt, NIH Guidelines III-F, F-8, Appendix C-II)**

### Ancestral *E. coli* K-12

Strain Designation	Origin or Collection
58	Stanford Strain
679	Stanford strain
WG1	Wisconsin strain

### *E. coli* K-12 Derivatives

Strain Designation	Origin or Collection	Strain Designation	Origin or Collection
5K	Lab strain	JC9387	Lab strain
58	Lab strain	JM83	Lab strain
58-161	Lab strain	JM101	Lab strain
AB284	Lab strain	KP7600	Lab strain
AB311	Lab strain	LE392	Lab strain
AG1	Lab strain	M15	Lab strain
C600	Lab strain	MB408	Lab strain
Cavalli Hfr	Lab strain	MG1655	Lab strain
DH1	Lab strain	Novablue	Novagen
Dh5-alpha	Lab strain	P678	Lab strain
DP50	Lab strain	PA 309	Lab strain
EMG2	Lab strain	REG-12	Lab strain
EPI100-T1R	Lab strain	S17-1	Lab strain
H1443	Lab strain	SCS-110	Stratagene

Strain Designation	Origin or Collection	Strain Designation	Origin or Collection
HB101	Lab strain	SM10	Lab strain
Hfr3000	Lab strain	STBL2	Invitrogen
Hfr 3000 X74	Lab strain	STBL3	Invitrogen
HMS 174	Novagen	SURE	Lab strain
JM109	Lab strain	TB1	NEB
TG1	Lab strain	WA704	Lab strain
TOP10	Invitrogen	W1485	Lab strain
W1485	Lab strain	W3110	Lab strain
W208	Lab strain	XL1-Blue	Stratagene
W3110	Lab strain	XL10-Gold	Stratagene
W945	Lab strain	XL0LR	Stratagene
WA704	Lab strain	Y10	Lab Strain
WG1	Lab strain	YN2980	Lab Strain

The following *E. coli* laboratory strains are not derived from K-12 and therefore any research utilizing these strains is **not** exempt from the NIH Guidelines. **Non-K12 *E. coli* strains (Risk Group 1, not exempt, NIH Guidelines III-E)**

#### *E. coli* NOT Derived from K-12

Strain Designation	Origin or Collection	Strain Designation	Origin or Collection
B	Laboratory strain	K5808	Laboratory strain
B-3	Laboratory strain	Mach1	Invitrogen
B/R	Laboratory strain	Nissile 1917	Laboratory strain
BL21	Novagen	Rosetta	Novagen
BL23	NEB	REG-811	Laboratory strain
C	Laboratory strain	TOPP	Stratagene
C41	Sigma Aldrich	W	Laboratory strain
C43	Sigma Aldrich	25922	Laboratory strain
FDA strain Seattle 1946	Laboratory strain		

Pathogenic *E. coli* strains (not exempt, NIH Guidelines III-D)

<b>Strain Designation</b>
<i>E. coli</i> , all strains bearing K1 antigen
<i>E. coli</i> enteroaggregative strain (EAEC)
<i>E. coli</i> enterohaemorrhagic strain (EHEC)
<i>E. coli</i> enteroinvasive strain (EIEC)
<i>E. coli</i> enteropathogenic strain (EPEC)
<i>E. coli</i> enterotoxigenic strain (ETEC)
<i>E. coli</i> Shiga toxin-producing (O157:H7)