

Table 1—Applications of BP and LR Clonase® enzymes.

Application	Recommended Clonase® enzyme mix	Proteins involved in site-specific recombination	Activity	Advantage
Creating Entry clones	BP Clonase® II	Int (Integrase) IHF (Integration Host Factor)	DNA recombinase DNA binding protein	<ul style="list-style-type: none">• High efficiency cloning for Entry clone construction• Single-mix format eliminates pipetting steps and error• Easy-to-use, single-mix format ensures enzyme stability• Convenient 10 µl reaction set up
Creating expression clones	LR Clonase® II Plus	Int (Integrase) IHF (Integration Host Factor) Xis (Excisionase)	DNA recombinase DNA binding protein DNA recombination (site specific, directional)	<ul style="list-style-type: none">• Highest cloning efficiency for single and multiple fragment cloning• Optimized for difficult cloning reactions• Works with MultiSite Gateway® Pro technology• Easy-to-use, single-mix format ensures enzyme stability• Convenient 10 µl reaction set up

Table 2—Gateway® expression vector options.

Application	Gateway® Destination vector family
Protein array	Expressway™ Plus Expression system
Antibody or antigen production	Champion™ pET Expression systems
Protein expression in <i>E. coli</i>	pDEST™14, 15, 17, and 24 pET160 and pET161 DEST™ vectors
Protein expression in yeast	pYES2-DEST™52
Protein expression in insect cells	BaculoDirect™ C-term Expression Kit
Protein expression in mammalian cells (constitutive expression)	pcDNA® mammalian expression vector family
Protein expression in mammalian cells (regulated expression)	pT-REx-DEST30 and pT-REx-DEST31 vectors
Protein expression in mammalian cells (viral delivery)	Virapower™ Lentiviral Expression Systems
Protein-protein interaction studies	ProQuest™ Two-Hybrid System using Gateway® technology
Localization	VividColors™ pcDNA GFP Destination vector family
RNAi	BLOCK-iT™ vector family
Reporter assay	GeneBLazer™ pcDNA vector family

TOPO® TA Cloning

Product	Description	Quantity	Cat. no.
pCR®8/GW/TOPO® TA Cloning Kit	Efficient TOPO® TA cloning kit simplifies Entry clone construction	20 rxns	K250020
pCR®8/GW/TOPO® TA Cloning Kit	Efficient TOPO® TA cloning with fast-growing competent <i>E. coli</i> that shortens the time for Entry clone construction	20 rxns	K252020
pCR®8/GW/TOPO® TA Cloning kit	Efficient TOPO® TA cloning with fast growing competent <i>E. coli</i> and plasmid purification drastically shortens and simplifies Entry clone construction, saving time and hassle.	20 rxns	K252002

Directional TOPO® Cloning

Product	Description	Quantity	Cat. no.
pENTR™/D-TOPO® Cloning Kit	Directional TOPO® Cloning kit that produces expression-ready Entry clones	20 rxns	K240020
pENTR™/SD/D-TOPO® Cloning Kit	Directional TOPO® Cloning, including the Shine-Dalgarno sequence that creates an <i>E. coli</i> expression-ready Entry clone	20 rxns	K242020
pENTR™/TEV/D-TOPO® Cloning Kit	Directional TOPO® Cloning kit that creates expression-ready Entry clones with 5' TEV sequence for N-terminal tag removal (creating native proteins)	20 rxns	K252520
pENTR™/TEV/D-TOPO® Cloning Kit	Directional TOPO® Cloning kit with fast-growing competent <i>E. coli</i> that shortens the time for Entry clone construction while creating expression-ready Entry clones with a 5' TEV sequence for N-terminal tag removal creating native proteins	20 rxns	K253520

PCR cloning using BP recombination

Product	Description	Quantity	Cat. no.
PCR Cloning System with Gateway® technology	Complete kit for directional cloning into a Gateway® vector with pDONR™ 221 vector with kanamycin selection	20 rxns	12535029
PCR Cloning System with Gateway® technology	Complete kit for directional cloning into a Gateway® vector with pDONR™/Zeo vector with Zeocin™ selection	20 rxns	12535037
pDONR™ 221 Vector		6 µg	12536017
pDONR™ Zeo Vector		6 µg	12535035

Restriction enzyme cloning

Product	Description	Quantity	Cat. no.
pENTR™ 1A Vector	Restriction enzyme cloning vector that produces in-frame (rf = 0), expression-ready Entry clones, including both Shine-Dalgarno and Kozak sequences	10 µg	11813011
pENTR™ 2B Vector	Restriction enzyme cloning vector that produce in-frame (rf = +1), expression-ready Entry clones	10 µg	11816014
pENTR™ 3C Vector	Restriction enzyme cloning vector that produce in-frame (rf = +2), expression-ready Entry clones	10 µg	11817012
pENTR™ 4 Vector	Same as pENTR™ 1A Vector except with <i>Nco</i> I instead of <i>Dra</i> I in MCS that produces in-frame (rf = 0), expression-ready Entry clones	10 µg	11818010
pENTR™ 11 Vector	Same as pENTR™ 1A Vector except with <i>Nsp</i> V instead of <i>Dra</i> I in MCS that produces in-frame (rf = 0), expression-ready Entry clones	10 µg	11819018

Multifragment assembly with Gateway® technology

Product	Description	Quantity	Cat. no.
MultiSite Gateway® Pro 2.0 Kit	Cloning two fragments into a Gateway® Destination vector	20 rxns	12537102
MultiSite Gateway® Pro 3.0 Kit	Cloning three fragments into a Gateway® Destination vector	20 rxns	12537103
MultiSite Gateway® Pro 4.0 Kit	Cloning four fragments into a Gateway® Destination vector	20 rxns	12537104
MultiSite Gateway® Pro Plus Kit	Allows for flexible cloning of up to four fragments into a Gateway® Destination vector	20 rxns	12537100
pcDNA™ 6.2/V5 PL-DEST Vector	A promoterless version of our most popular pcDNA™ vector for use with any of the MultiSite Gateway® Pro Kits Vector has C-terminal V5 and blasticidin selection	6 µg	12537162

Ultimate™ ORF Clones

Product	Description	Cat. no.
Ultimate™ Human ORF Clone	The Ultimate™ ORF Clone Collection contains DNA- and amino acid sequence-verified and expression-ready cDNAs, including kinases, G-protein-related, phosphatases, ion channels, GPCRs, chemokines, nuclear receptors, and cytokines; visit www.invitrogen.com/ORF to select your clone today	HORF01
Ultimate™ Mouse ORF Clone		MORF01

BP Clonase® enzymes

Product	Description	Quantity	Cat. no.
Gateway® BP Clonase® II Enzyme Mix	A proprietary blend of both Int (Integrase) and IHF (Integration Host Factor) proteins that catalyze the <i>in vitro</i> recombination of PCR products or DNA segments from clones and a donor vector	20 rxns	11789020
		100 rxns	11789100
Gateway® BP Clonase® Enzyme Mix		20 rxns	11789013
		100 rxns	11789021