# Kit CoA Cover Page

| KAPA LTP Lib Prep Kit PCR-free (8rxn) | | | |
|---|---|---|---|
| **Kit Code** | **Part Number** | **Lot Number** | **Kit Expiry Date** |
| KK8231 | 07961871001 | 003833-54-1 | 2018-05-27 |

| Component Code | Component Description | Component Lot Number |
|---|---|---|
| KB8200 | 10x End-repair Buffer (100 µl) | 00066291 |
| KE8200 | End-repair Enzyme Mix (50 µl) | 00065824 |
| KB8210 | 10x A-Tailing Buffer (50 µl) | 00066708 |
| KE8210 | A-Tailing Enzyme (30 µl) | 00065833 |
| KB8220 | 5x Ligation Buffer (100 µl) | 00066704 |
| KE8220 | DNA Ligase (50 µl) | 00065638 |
| KB8232 | 20% PEG 8000/2.5 M NaCl (5 ml) | 00063238 |

*CoA's are not issued for complete kits, but for the individual component lots from which kits are assembled. CoA's for all component lots listed are attached.*

| Generated By | Date |
|---|---|
| Danielle Da Silva (QC Scientist) | 2016-05-27 |

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# Certificate of Analysis

| PRODUCT DETAILS | | |
|---|---|---|
| **Product name** | 10X End Repair Buffer | |
| **Code & Pack size** | KB8200 | 100 µL |
| **Lot number** | 66291 | |
| **Code and lot number of bulk corresponding solution** | KR0217 | 072914 |

| QUALITY CONTROL PARAMETERS | | |
|---|---|---|
| **Parameter** | **Specification** | **Result** |
| **Composition** | 10X End Repair Buffer consists of 500 mM Tris-HCl, 100 mM $MgCl_2$, 100 mM DTT, 10 mM ATP and 4 mM of each dNTP (dATP, dCTP, dGTP and dTTP), pH 7.5 at 25 °C. | **Passed** |
| **Functional assay** | Test and reference DNA libraries are prepared (in quadruplicate) from 100 ng of sheared *E. coli* DNA using standard Library Preparation Kit protocols (End Repair, A-Tailing and Adapter Ligation). A 1:2000 dilution of each test and reference library is quantified with the KAPA Library Quantification Kit for Illumina. The average undiluted test and reference library concentration is >1 nM, and test library concentration is within 1 nM of reference library concentration. Average melting temperature (assessed with a post-qPCR melt curve) of the test libraries is within 1 °C of the reference libraries. | **Passed** |
| **Endonuclease activity** | No detectable nicking or linearization of plasmid DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **Exonuclease activity** | No detectable degradation of lambda DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **DNA contamination** | A standard KAPA SYBR FAST no template reaction with 0.5X End Repair Buffer contains <45 fg/µl bacterial genomic DNA (*E. coli* and related strains; as assessed by amplification of a 217 bp 16S rRNA fragment using a multicopy primer set in a 40-cycle reaction) and no detectable human genomic DNA (as assessed by amplification of a 290 bp b-actin fragment using a multicopy primer set in a 40-cycle reaction). | **Passed** |

Generated by Melissa Jonas (QC Scientist) 2016-03-24

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# Certificate of Analysis

| PRODUCT DETAILS | | |
|---|---|---|
| **Product name** | End Repair Enzyme Mix | |
| **Code & Pack size** | KE8200 | 50 µL |
| **Lot number** | 65824 | |
| **Code and lot number of bulk corresponding solution** | KR0218 | 139K071015 |

| QUALITY CONTROL PARAMETERS | | |
|---|---|---|
| **Parameter** | **Specification** | **Result** |
| **Composition** | End Repair Enzyme Mix contains 3,000 U/ml T4 DNA Polymerase and 10,000 U/ml T4 Polynucleotide Kinase, in a 100 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, 0.1% Triton X-100, 50% glycerol buffer, pH 7.4 at 25 °C. | **Passed** |
| **Purity** | The enzymes contained in this product contains <1% contaminating protein, as determined by SDS-PAGE. | **Passed** |
| **Functional assay** | Test and reference DNA libraries are prepared (in quadruplicate) from 100 ng of sheared *E. coli* DNA using standard Library Preparation Kit protocols (End Repair, A-Tailing and Adapter Ligation). A 1:2000 dilution of each test and reference library is quantified with the KAPA Library Quantification Kit for Illumina. The average undiluted test and reference library concentration is >1 nM, and test library concentration is within 1 nM of reference library concentration. Average melting temperature (assessed with a post-qPCR melt curve) of the test libraries is within 1 °C of the reference libraries. | **Passed** |
| **Endonuclease activity** | No detectable nicking or linearization of plasmid DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **Exonuclease activity** | No detectable degradation of lambda DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **DNA contamination** | A standard KAPA SYBR FAST no template reaction with 0.5 µl of End Repair Enzyme Mix contains <45 fg/µl bacterial genomic DNA (*E. coli* and related strains; as assessed by amplification of a 217 bp 16S rRNA fragment using a multicopy primer set in a 40-cycle reaction) and no detectable human genomic DNA (as assessed by amplification of a 290 bp b-actin fragment using a multicopy primer set in a 40-cycle reaction). | **Passed** |

Generated by Melissa Jonas (QC Scientist) 2016-02-01

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# Certificate of Analysis

| PRODUCT DETAILS | | |
|---|---|---|
| **Product name** | 10X A-Tailing Buffer | |
| **Code & Pack size** | KB8210 | 50 µL |
| **Lot number** | 66708 | |
| **Code and lot number of bulk corresponding solution** | KR0219 | 072214 |

| QUALITY CONTROL PARAMETERS | | |
|---|---|---|
| **Parameter** | **Specification** | **Result** |
| **Composition** | 10X A-Tailing Buffer consists of 100 mM Tris-HCl, 100 mM MgCl2, 500 mM NaCl, 10 mM DTT and 2 mM dATP, pH 7.9 at 25 °C. | **Passed** |
| **Functional assay** | Test and reference DNA libraries are prepared (in quadruplicate) from 100 ng of sheared *E. coli* DNA using standard Library Preparation Kit protocols (End Repair, A-Tailing and Adapter Ligation). A 1:2000 dilution of each test and reference library is quantified with the KAPA Library Quantification Kit for Illumina. The average undiluted test and reference library concentration is >1 nM, and test library concentration is within 1 nM of reference library concentration. Average melting temperature (assessed with a post-qPCR melt curve) of the test libraries is within 1 °C of the reference libraries. | **Passed** |
| **Endonuclease activity** | No detectable nicking or linearization of plasmid DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **Exonuclease activity** | No detectable degradation of lambda DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **DNA contamination** | A standard KAPA SYBR FAST no template reaction with 0.05X A-Tailing Buffer contains <45 fg/µl bacterial genomic DNA (*E. coli* and related strains; as assessed by amplification of a 217 bp 16S rRNA fragment using a multicopy primer set in a 40-cycle reaction) and no detectable human genomic DNA (as assessed by amplification of a 290 bp b-actin fragment using a multicopy primer set in a 40-cycle reaction). | **Passed** |

Generated by Toni Marinus (QC Scientist) 2016-05-17

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# Certificate of Analysis

| PRODUCT DETAILS | | |
|---|---|---|
| **Product name** | A-Tailing Enzyme | |
| **Code & Pack size** | KE8210 | 30 µL |
| **Lot number** | 65833 | |
| **Code and lot number of bulk corresponding solution** | KR0220 | 19122313 |

| QUALITY CONTROL PARAMETERS | | |
|---|---|---|
| **Parameter** | **Specification** | **Result** |
| **Composition** | A-Tailing Enzyme contains 5,000 U/ml Klenow (3' – 5' exo-) DNA Polymerase in a 20 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol buffer, pH 7.5 at 25 °C. | **Passed** |
| **Purity** | The enzyme contained in this product contains <1% contaminating protein, as determined by SDS-PAGE. | **Passed** |
| **Functional assay** | Test and reference DNA libraries are prepared (in quadruplicate) from 100 ng of sheared *E. coli* DNA using standard Library Preparation Kit protocols (End Repair, A-Tailing and Adapter Ligation). A 1:2000 dilution of each test and reference library is quantified with the KAPA Library Quantification Kit for Illumina. The average undiluted test and reference library concentration is >1 nM, and test library concentration is within 1 nM of reference library concentration. Average melting temperature (assessed with a post-qPCR melt curve) of the test libraries is within 1 °C of the reference libraries. | **Passed** |
| **Endonuclease activity** | No detectable nicking or linearization of plasmid DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **Exonuclease activity** | No detectable degradation of lambda DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **DNA contamination** | A standard KAPA SYBR FAST no template reaction with 0.5 µl of A-Tailing Enzyme contains <45 fg/µl bacterial genomic DNA (*E. coli* and related strains; as assessed by amplification of a 217 bp 16S rRNA fragment using a multicopy primer set in a 40-cycle reaction) and no detectable human genomic DNA (as assessed by amplification of a 290 bp b-actin fragment using a multicopy primer set in a 40-cycle reaction). | **Passed** |

Generated by Melissa Jonas (QC Scientist) 2016-02-01

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# Certificate of Analysis

| PRODUCT DETAILS | | |
|---|---|---|
| **Product name** | 5X Ligation Buffer | |
| **Code & Pack size** | KB8220 | 100 µL |
| **Lot number** | 66704 | |
| **Code and lot number of bulk corresponding solution** | KR0221 | 090314 |

| QUALITY CONTROL PARAMETERS | | |
|---|---|---|
| **Parameter** | **Specification** | **Result** |
| **Composition** | 5X Ligation Buffer consists of 330 mM Tris-HCl, 50 mM MgCl2, 5 mM DTT, 5 mM ATP and 30% PEG 6000, pH 7.6 at 25 °C. | **Passed** |
| **Functional assay** | Test and reference DNA libraries are prepared (in quadruplicate) from 100 ng of sheared *E. coli* DNA using standard Library Preparation Kit protocols (End Repair, A-Tailing and Adapter Ligation). A 1:2000 dilution of each test and reference library is quantified with the KAPA Library Quantification Kit for Illumina. The average undiluted test and reference library concentration is >1 nM, and test library concentration is within 1 nM of reference library concentration. Average melting temperature (assessed with a post-qPCR melt curve) of the test libraries is within 1 °C of the reference libraries. | **Passed** |
| **Endonuclease activity** | No detectable nicking or linearization of plasmid DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **Exonuclease activity** | No detectable degradation of lambda DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **DNA contamination** | A standard KAPA SYBR FAST no template reaction with 0.25X Ligation Buffer contains <45 fg/µl bacterial genomic DNA (*E. coli* and related strains; as assessed by amplification of a 217 bp 16S rRNA fragment using a multicopy primer set in a 40-cycle reaction) and no detectable human genomic DNA (as assessed by amplification of a 290 bp b-actin fragment using a multicopy primer set in a 40-cycle reaction). | **Passed** |

Generated by Toni Marinus (QC Scientist) 2016-05-17

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# Certificate of Analysis

| PRODUCT DETAILS | | |
|---|---|---|
| **Product name** | DNA Ligase | |
| **Code & Pack size** | KE8220 | 50 µl |
| **Lot number** | 65638 | |
| **Code and lot number of bulk corresponding solution** | KR0222 | 29072415 |

| QUALITY CONTROL PARAMETERS | | |
|---|---|---|
| **Parameter** | **Specification** | **Result** |
| **Composition** | DNA Ligase contains 600,000 U/ml T4 DNA Ligase in a 10 mM Tris-HCl, 50 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol buffer, pH 7.5 at 25 °C. | **Passed** |
| **Purity** | The enzyme contained in this product contains <1% contaminating protein, as determined by SDS-PAGE. | **Passed** |
| **Functional assay** | Test and reference DNA libraries are prepared (in quadruplicate) from 100 ng of sheared *E. coli* DNA using standard Library Preparation Kit protocols (End Repair, A-Tailing and Adapter Ligation). A 1:2000 dilution of each test and reference library is quantified with the KAPA Library Quantification Kit for Illumina. The average undiluted test and reference library concentration is >1 nM, and test library concentration is within 1 nM of reference library concentration. Average melting temperature (assessed with a post-qPCR melt curve) of the test libraries is within 1 °C of the reference libraries. | **Passed** |
| **Endonuclease activity** | No detectable nicking or linearization of plasmid DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **Exonuclease activity** | No detectable degradation of lambda DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **DNA contamination** | A standard KAPA SYBR FAST no template reaction with 0.5 µl of DNA Ligase contains <45 fg/µl bacterial genomic DNA (*E. coli* and related strains; as assessed by amplification of a 217 bp 16S rRNA fragment using a multicopy primer set in a 40-cycle reaction) and no detectable human genomic DNA (as assessed by amplification of a 290 bp b-actin fragment using a multicopy primer set in a 40-cycle reaction). | **Passed** |

Generated by Juli Kriel (QC Scientist) 2016-01-12

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# Certificate of Analysis

| PRODUCT DETAILS | | |
|---|---|---|
| **Product name** | 20% PEG 8000/2.5 M NaCl | |
| **Code & Pack size** | KB8232 | 5 mL |
| **Lot number** | 63238 | |
| **Code and lot number of bulk corresponding solution** | BB0030 | 62390 |

| QUALITY CONTROL PARAMETERS | | |
|---|---|---|
| **Parameter** | **Specification** | **Result** |
| **Functional assay** | Fourteen distinct bands are visible by agarose gel electrophoresis/ ethidium bromide staining, following the digestion of pGen6 plasmid with restriction enzyme HpaII; and retention of a specified number of these bands after purification with three different volumes of 20% PEG 8000/2.5 M NaCl confirms size selectivity. | **Passed** |
| **Endonuclease activity** | No detectable nicking or linearization of plasmid DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ethidium bromide staining. | **Passed** |
| **Exonuclease activity** | No detectable degradation of lambda DNA after incubation for 8 hours at 37 °C, as assessed by agarose gel electrophoresis/ ethidium bromide staining. | **Passed** |
| **DNA contamination** | A standard reaction with no template contains <50 fg/µl bacterial genomic DNA (*E. coli* and related strains; as assessed by amplification of a 411 bp 16S rRNA fragment using a multicopy primer set in a 35-cycle reaction) and <0.5 pg/µl human genomic DNA (as assessed by amplification of a 290 bp b-actin fragment using a multicopy primer set in a 35-cycle reaction). | **Passed** |

Generated by Juli Kriel (QC Scientist) 2015-02-26

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