



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

INSTRUCTION MANUAL

DNA Clean & Concentrator™-500

Catalog Nos. **D4031 & D4032**

Highlights

- Simple, rapid recovery of ultra-pure DNA from large-scale sample sources.
- Unique column construction allows sample washing to be performed using a centrifuge or vacuum source.
- Eluted DNA is ideal for PCR, DNA sequencing, DNA transfection, DNA ligation, endonuclease digestion, RNA transcription, radiolabeling, etc.

Contents

Product Contents.....	1
Specifications.....	1
Product Description.....	2-3
Buffer Preparation.....	4
Protocol.....	4
Troubleshooting.....	5
Ordering Information.....	6
List of Related Products.....	7-8

Satisfaction of all Zymo Research products is guaranteed. If you should be dissatisfied with this product please call 1-888-882-9682.

Product Contents

DNA Clean & Concentrator™-500 (Kit Size)	D4031 (10 Preps.)	D4032 (20 Preps.)	Storage Temperature
DNA Binding Buffer	100 ml	2 x 100 ml	Room Temp.
DNA Wash Buffer¹	24 ml	48 ml	Room Temp.
DNA Elution Buffer	2 x 16 ml	2 x 50 ml	Room Temp.
Zymo-Spin™ VI Columns	10	20	Room Temp.
Instruction Manual	1	1	-

Integrity of kit components is guaranteed for up to one year from date of purchase. Reagents are routinely tested on a lot-to-lot basis to ensure they provide the highest performance and reliability.

¹ Ethanol must be added prior to use as indicated on the **DNA Wash Buffer** label.

Specifications

- **DNA Purity** – High-quality DNA ($A_{260}/A_{280} > 1.8$) ideal for ligation, sequencing, labeling, PCR, microarray, transfection, transformation, and restriction digestion procedures.
- **DNA Size Limits** – From ~50 bp to 23 kb.
- **DNA Recovery** – Typically, up to 500 µg total DNA per column can be eluted into as little as 2 ml of low salt **DNA Elution Buffer** or water. For DNA 50 bp to 10 kb, the recovery is 70-90%. For DNA 11 kb to 23 kb, the recovery is 50-70%.
- **Sample Sources** – DNA from enzymatic reactions (e.g., PCR, restriction endonuclease digestions), plasmid preparations, and impure preparations.
- **Product Detergent Tolerance** – ≤ 5% Triton X-100, ≤ 5% Tween-20, ≤ 5% Sarkosyl, ≤ 0.1% SDS.
- **Equipment Needed** – Swinging bucket centrifuge or vacuum source (optional).

Note: ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. It is not intended for use in diagnostic procedures. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility.

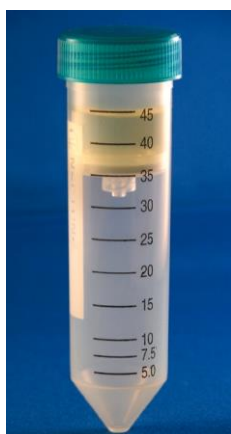
ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Product Description

The **DNA Clean & Concentrator™-500 (DCC™-500)** is designed for the rapid, large format purification and concentration of up to 500 µg of high quality DNA from samples including large-scale restriction endonuclease digestions and impure DNA preparations. The **DCC™-500** features a single-buffer system that allows for efficient DNA adsorption onto the matrix of the supplied **Zymo-Spin™ VI column**. Simply add the specially formulated **DNA Binding Buffer** to your samples and transfer the mixtures to the supplied **Zymo-Spin™ VI Column**. The DNA is washed then eluted with a small volume (≥ 2 ml) of water or supplied **DNA Elution Buffer** using a centrifuge. The purified DNA is ideal for DNA ligation, sequencing, labeling, PCR, microarray, transfection, transformation, and restriction digestion procedures. The entire DNA purification/concentration procedure typically takes less than 20 minutes.

Loading and washing the Zymo-Spin™ VI Column can be performed using any combination of the following:

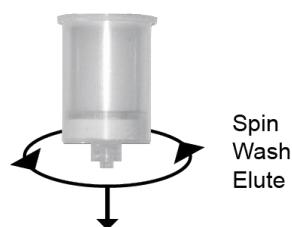


Centrifuge: Zymo-Spin™ VI Column inside a 50 ml conical tube.



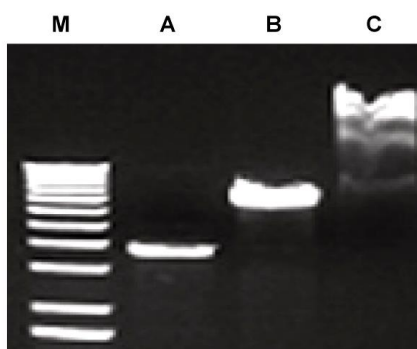
Vacuum: Zymo-Spin VI™ Column connected to a vacuum manifold.

**Elute DNA
Using a Centrifuge**



Spin
Wash
Elute

Ultra-pure DNA
DCC-500™ procedure.









Ultra-pure DNA from the **DNA Clean & Concentrator™** can be easily ligated for efficient cloning. Lanes: A: 3.5 kb blunt-ended vector; B: 7.4 kb blunt-ended DNA insert; C: Blunt-end ligation of A+B mixture.

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Available Formats

	DCC™-5	DCC™-25	DCC™-100	DCC™-500	Genomic DCC™	ZR-96 DCC™-5
						
Name	Zymo-Spin™ I & IC	Zymo-Spin™ II & IIC	Zymo-Spin™ V	Zymo-Spin™ VI	Zymo-Spin™ IC-XL	Zymo-Spin™ I-96
Capacity	5 µg/ prep.	25 µg/ prep.	100 µg/ prep.	500 µg/ prep.	10 µg/ prep.	5 µg/ prep.
Elution Vol.	≥ 6 µl	≥ 25 µl	≥ 150 µl	≥ 2 ml	≥ 10 µl	≥ 10 µl
Cat. Nos.	D4003, D4013	D4005, D4033	D4029, D4030	D4031, D4032	D4010, D4011	D4023, D4024

Typical DCC™ Applications

Post-PCR DNA Clean-up	Efficient desalting of DNA with the removal of DNA polymerases, primers and free dNTPs.
DNA Clean-up From Enzymatic Reactions	Efficient desalting of DNA with the removal of modifying enzymes, RNA polymerases, ligases, kinases, nucleases, phosphatases, endonucleases, <i>etc.</i>
Post-Reverse Transcription (RT) & cDNA Clean-up	Efficiently purifies DNA following RT, either as a DNA/RNA complex or as single stranded cDNA following chemical hydrolysis of the RNA template.
Plasmid DNA Clean-up	Efficiently purifies plasmid DNA from “home-made” preparations of cell free lysates or from commercial kits. Plasmid DNA purified and concentrated using the DCC™ has proven an excellent substrate for high quality DNA sequencing.
Isotope and Dye Removal	Efficiently removes unincorporated fluorescent (<i>i.e.</i> , AMCA, FITC, BIO, DIG, Cy3, Cy5, FAM, <i>etc.</i>) and radiolabeled dNTP derivatives from DNA following <i>in vitro</i> labeling reactions.
Purification of M13 ssDNA	The DCC™ can be used for the rapid isolation of single stranded M13 phage DNA directly from phage-infected <i>E. coli</i> culture supernatant.

- ✓ For purification of short DNA or RNA oligonucleotides ≥16 nt, use the **Oligo Clean & Concentrator (D4060, D4061)**.
- ✓ For ChIP (Chromatin Immunoprecipitation) sample cleanup, use the **ChIP DNA Clean & Concentrator (D5201, D5205)** for high quality DNA from any step in a standard ChIP protocol.
- ✓ For post-cycle sequencing samples, use the **ZR Sequencing DNA Clean-up Kit (D4050, D4051)** for dye blob elimination.
- ✓ For samples containing PCR inhibitors, use the **OneStep™ PCR Inhibitor Removal Kit (D6030, D6035)**.

Selected Citations

- Li, N (2010) Whole genome DNA methylation analysis based on high throughput sequencing technology. *Methods*, 52 (3), 221-232.
- Khoo, S (2011) Acquiring genome-wide gene expression profiles in Guthrie card blood spots using microarrays. *Pathology*, 61 (1), 1-6.
- Lee, EJ (2011) Targeted bisulfite sequencing by solution selection and massively parallel sequencing. *Nucleic Acids Research*, 39(19), e127, doi:10.1093/nar/gkr598
- Papageorgiou, EA. (2009) Sites of differential DNA methylation between placenta and peripheral blood. *Am J Pathol*, 174 (5), 1609-1618.
- Ferguson, AA et al. (2009) Retrofitting ampicillin resistant vectors by recombination for use in generating *C. elegans* transgenic animals by bombardment. *Plasmid*, 62, 140-145.

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Buffer Preparation

- ✓ **Before starting:** Add 96 ml 100% ethanol (104 ml 95% ethanol) to the 24 ml **DNA Wash Buffer** concentrate.

Protocol

Add 2-7 volumes of **DNA Binding Buffer** to each volume of DNA sample (see table below). Mix briefly by gently inverting the tube.

Application	DNA Binding Buffer : Sample	Example
Plasmid, genomic DNA (>2 kb)	2 : 1	200 µl : 100 µl
PCR product, DNA fragment	5 : 1	500 µl : 100 µl
ssDNA (e.g. cDNA, M13 phage ¹)	7 : 1	700 µl : 100 µl

Use any of the following two procedures to process samples.

Centrifuge ²

1. Place the **Zymo-Spin™ VI Column** inside a 50 ml conical tube. Transfer the prepared sample mixture (see above) into the **Zymo-Spin™ VI Column**³.
2. Centrifuge for 5 minutes at 3,000 x *g*². Discard the flow-through.
3. Add 10 ml **DNA Wash Buffer** to the **Zymo-Spin™ VI Column**. Centrifuge the **Zymo-Spin™ VI Column** for 5 minutes.
4. Transfer the **Zymo-Spin™ VI Column** into a new 50 ml conical tube. Add 2-3 ml **DNA Elution Buffer**⁴ or water⁵ directly to the column matrix. Wait for one minute to ensure that the column matrix has been fully hydrated. Centrifuge for 3 minutes to elute the DNA.

Ultra-pure DNA is now ready for use.

Vacuum

1. Attach **Zymo-Spin™ VI column** to a suitable vacuum manifold (see image on page 2). Transfer the prepared sample mixture (see above) into the **Zymo-Spin™ VI Column**³.
2. Turn on vacuum source and wait for sample to clear from the column.
3. Add 5 ml **DNA Wash Buffer** to the **Zymo-Spin™ VI Column**. Repeat wash step. After washing, leave the vacuum source “on” for an additional 5 minutes to remove any residual **Wash Buffer** from the column.
4. Transfer the **Zymo-Spin™ VI Column** into a new 50 ml conical tube. Add 2-3 ml **DNA Elution Buffer**⁴ or water⁵ directly to the column matrix. Wait for one minute to ensure that the column matrix has been fully hydrated. Centrifuge at 3,000 x *g* for 3 minutes to elute the DNA.

Ultra-pure DNA is now ready for use.

For **Assistance**, please contact Zymo Research Technical Support at 1-888-882-9682 or e-mail tech@zymoresearch.com.

Notes:

¹ Centrifuge phage-infected bacterial culture at 8,000 x *g* for 1 minute prior to mixing an aliquot of the phage-containing supernatant with the **DNA Binding Buffer**.

² All centrifugation steps should be performed at 3,000 x *g*.

³ The sample capacity of the column is 15 ml. Therefore, it may be necessary to load a column multiple times if a sample has a volume larger than 15 ml.

⁴ **DNA Elution Buffer:** 10 mM Tris-HCl, pH 8.5, 0.1 mM EDTA

⁵ Elution of DNA from the column is dependent on pH and temperature. If water is used, make sure the pH is >6.0. Waiting an additional minute prior to elution may improve the yield of larger (> 6 kb) DNA. For even larger DNA (> 10 kb), the total yield may be improved by eluting the DNA with 60-70 °C **DNA Elution Buffer**.

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Troubleshooting

Low Recovery

- **Improperly Prepared/Stored DNA Wash Buffer**

Make sure ethanol has been added to the **DNA Wash Buffer** concentrate. Cap the bottle tightly to prevent evaporation over time.

- **Addition of DNA Elution Buffer**

Add elution buffer directly to the column matrix and not to the walls of the column. Elution buffer requires contact with the matrix for at least 1 minute for large DNA ≥ 10 kb.

- **Incomplete Elution**

1. DNA elution is dependent on pH, temperature, and time. For large genomic DNA (≥ 50 kb), apply heated elution buffer (60-70 °C) and incubate for several minutes prior to elution.
2. Sequential elutions may be performed for quantitatively higher recovery but lower final DNA concentration. This is recommended for DNA ≥ 10 kb.

Low A_{260}/A_{230} Ratios

- **Column Tip Contaminated**

When removing the column from the collection tube, be careful that the tip of the column does not come into contact with the flowthrough. Trace amounts of salt from the flowthrough can contaminate a sample resulting in low A_{260}/A_{230} ratios. Ethanol contamination from the flowthrough can also interfere with DNA elution. Zymo-Spin™ columns are designed for complete elution with no buffer retention or carryover.

Following Clean-up with the DCC™, Multiple Bands Appear in an Agarose Gel

- **Acidification of DNA Loading Dye**

Most loading dyes do not contain EDTA and will acidify ($\text{pH} \leq 4$) over time due to some microbial growth. This low pH is enough to cause DNA degradation. Therefore, if water is used to elute the DNA, 6X Loading Dye containing 1 mM EDTA is recommended.

Ordering Information

Product Description	Catalog No.	Kit Size (Preps.)
DNA Clean & Concentrator™-5 (for purification of up to 5 µg DNA per prep.) <i>Supplied with uncapped columns</i>	D4003 D4004	50 200
DNA Clean & Concentrator™-5 (for purification of up to 5 µg DNA per prep.) <i>Supplied with capped columns</i>	D4013 D4014	50 200
ZR-96 DNA Clean & Concentrator™-5 (for 96-well purification of up to 5 µg DNA per well)	D4023 D4024	2 x 96 4 x 96
DNA Clean & Concentrator™-25 (for purification of up to 25 µg DNA per prep.) <i>Supplied with uncapped columns</i>	D4005 D4006	50 200
DNA Clean & Concentrator™-25 (for purification of up to 25 µg DNA per prep.) <i>Supplied with capped columns</i>	D4033 D4034	50 200
DNA Clean & Concentrator™-100 (for purification of up to 100 µg DNA per prep.)	D4029 D4030	25 50
DNA Clean & Concentrator™-500 (for purification of up to 500 µg DNA per prep.)	D4031 D4032	10 20
Oligo Clean & Concentrator™ (for purification of up to 5 µg of oligonucleotides per prep.)	D4060 D4061	50 200
Genomic DNA Clean & Concentrator™ (for purification of up to 10 µg genomic DNA per prep.)	D4010 D4011	25 100

Refer to Page 3 for column design specifics in each kit.

For Individual Sale	Catalog No.	Size
DNA Binding Buffer	D4003-1-L D4004-1-L	50 ml 100 ml
DNA Wash Buffer (concentrate)	D4003-2-24 D4003-2-48	24 ml 48 ml
DNA Elution Buffer	D3004-4-16 D3004-4-50	16 ml 50 ml
Zymo-Spin™ VI Columns	C1013-10 C1013-20	10 columns 20 columns

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Popular Products From Zymo Research

Product	Description	Kit Size (Preps.)	Catalog No. (Format)
DNA Clean-up, Concentration & Recovery			
DNA Clean & Concentrator™-5	Clean and concentrate up to 5 µg DNA into ≥6 µl elution volume in as little as 2 minutes with no wash residue carryover.	50 200 50 200	D4003 (uncapped) D4004 (uncapped) D4013 (capped) D4014 (capped)
DNA Clean & Concentrator™-25	Clean and concentrate 25 µg of DNA into ≥25 µl elution volume in as little as 2 minutes with no wash residue carryover.	50 200 50 200	D4005 (uncapped) D4006 (uncapped) D4033 (capped) D4034 (capped)
ZR-96 DNA Clean & Concentrator™-5	Quick (30 minute), high throughput recovery of up to 5 µg pure DNA into 10-15 µl minimum elution volume allows for highly concentrated DNA.	2 x 96 4 x 96	D4023 D4024
Genomic DNA Clean & Concentrator™	Quick (5 minute) clean-up of up to 10 µg high molecular weight DNA (≥ 20kb - 200 kb) from any enzymatic reaction or impure preparation without precipitations.	25 100	D4010 D4011
Zymoclean™ Gel DNA Recovery Kit	Purify DNA from high and low-melting agarose gels in minutes.	50 200 50 200	D4001 (uncapped) D4002 (uncapped) D4007 (capped) D4008 (capped)
ZR-96 Zymoclean™ Gel DNA Recovery Kit	High-throughput DNA purification from high and low-melting agarose gels.	2 x 96 4 x 96	D4021 D4022
Zymoclean™ Large Fragment DNA Recovery Kit	Purify high molecular weight DNA (≥ 20 kb - 200 kb) from high and low-melting agarose gels in minutes.	25 100	D4045 D4046
OneStep™ PCR Inhibitor Removal Kit	Fast, one step procedure for removal of PCR inhibitors such as polyphenolics, humic/fulvic acids, melanin, etc. for successful PCR and other downstream applications.	50 2 x 96	D6030 D6035

Plasmid DNA Purification			
Zyppy™ Plasmid Miniprep Kit	Pellet-Free™ plasmid DNA purification in less than 10 minutes. Recover up to 25 µg DNA in as low as 30 µl.	50 100 400	D4036 D4019 D4020
Zyppy™-96 Plasmid Miniprep	The fastest and simplest high-throughput method for plasmid purification. Magnetic bead format available for automated liquid handling platforms.	2 x 96 4 x 96 8 x 96 2 x 96 4 x 96 8 x 96	D4041 (spin plate) D4042 (spin plate) D4043 (spin plate) D4100 (magnetic bead) D4101 (magnetic bead) D4102 (magnetic bead)
Zyppy™ Plasmid Midiprep Kit	Pellet-Free™ plasmid DNA purification in 15 minutes in a 150 µl minimum elution volume.	25 50	D4025 D4026
ZR Plasmid MiniPrep™-Classic	Plasmid DNA purification in minutes: (alkaline lysis/spin column format for low 30 µl elution volume).	100 400 800	D4015 D4016 D4054

Genomic DNA Purification			
Quick-gDNA™ MiniPrep	Easy purification from whole blood, plasma, serum, body fluids, buffy coat, tissue, swabs or cultured cells ≥15 minutes <u>without</u> the use of Proteinase K or organic denaturants.	50/200 50/200	D3006/D3007 uncapped) D3024/D3025 (capped)
ZR Genomic DNA™-Tissue MiniPrep	High quality DNA purification from <u>solid tissues</u> (e.g., tail snips, ear punches, adipose tissue, etc.), body fluids, cultured cells, buccal cells, FFPE tissues, hair, and other biological sources using Proteinase K and Fast.	50/200 50/200	D3050 D3051
Environmental DNA Purification Kits	Unique BashingBead™ technology allows isolation of DNA from samples refractory to conventional lysis procedures including tough-to-lyse tissues, soil samples, feces, plants, seeds, insects, bacteria, yeast, filamentous fungi, unicellular and filamentous algae, and protozoa	Spin Column & 96-well Plate	Visit website for a comprehensive list

RNA Purification			
RNA Clean & Concentrator™-5	Clean and concentrate up to 5 µg RNA into ≥6 µl elution volume in as little as 5 minutes with no wash residue carryover.	50 200	R1015 R1016
Direct-Zol™ RNA MiniPrep	Quick, spin column purification of high-quality (DNA-free) total RNA directly from <i>TRI-Reagent®</i> or similar acid-guanidinium-phenol based reagents (TRIzol®, RNAzol®, QIAzol®, TriPure, RNA-Bee <i>etc.</i>).	50 200	R2051 R2053
ZR RNA MiniPrep	Quick (15 minute) RNA isolation from a variety of sources using <i>Fast-Spin</i> column technology without the use of organic denaturants..	50 200	R1064 R1065

ZYMO RESEARCH CORP.

Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com

Epigenetics Products From Zymo Research

Product	Description	Kit Size	Cat. No. (Format)
Bisulfite Kits for DNA Methylation Detection			
EZ DNA Methylation™ Kit	For the conversion of unmethylated cytosines in DNA to uracil via the <u>chemical-denaturation</u> of DNA and a specially designed CT Conversion Reagent. <i>Fast-Spin</i> technology ensures ultra-pure, converted DNA for subsequent DNA methylation analysis. Magnetic bead format for automated liquid handling platforms.	50/200 Rxns. 2 x 96 Rxns. 2 x 96 Rxns. 4 x 96 Rxns.	D5001/D5002 (column) D5003 (shallow-well plate) D5004 (deep-well plate) D5040 (magnetic bead)
EZ DNA Methylation-Gold™ Kit	For the fast (3 hr.) conversion of unmethylated cytosines in DNA to uracil via <u>heat/chemical-denaturation</u> of DNA and a specially designed CT Conversion Reagent. <i>Fast-Spin</i> technology ensures ultra-pure, converted DNA for subsequent DNA methylation analysis. Magnetic bead format for automated liquid handling platforms.	50/200 Rxns. 2 x 96 Rxns. 2 x 96 Rxns. 4 x 96 Rxns.	D5005/D5006 (column) D5007 (shallow-well plate) D5008 (deep-well plate) D5042 (magnetic bead)
EZ DNA Methylation-Direct™ Kit	Simple and reliable DNA bisulfite conversion directly from blood, tissue (FFPE/LCM), and cells without the prerequisite for DNA purification in as little as 4-6 hrs. The increased sensitivity of this kit makes it possible to amplify bisulfite converted DNA from as few as 10 cells or 50 pg DNA. Magnetic bead format for adaptation to automated liquid handling platforms.	50/200 Rxns. 2 x 96 Rxns. 2 x 96 Rxns. 4 x 96 Rxns.	D5020/D5021 (column) D5022 (shallow-well plate) D5023 (deep-well plate) D5044 (magnetic bead)
EZ DNA Methylation-Lightning™ Kit	Complete bisulfite conversion in about an hour using a unique liquid format conversion reagent. <i>Fast-Spin</i> technology ensures ultra-pure, converted DNA for subsequent DNA methylation analysis. Magnetic bead format for automated liquid handling platforms.	50/200 Rxns. 2 x 96 Rxns. 2 x 96 Rxns. 4 x 96 Rxns.	D5030/D5031 (column) D5032 (shallow-well plate) D5033 (deep-well plate) D5046 (magnetic bead)
EZ DNA Methylation-Startup™ Kit	Designed for the first time user requiring a consolidated product to perform DNA methylation analysis. Includes technologies for sample processing, bisulfite treatment of DNA, and PCR amplification of "converted" DNA for methylation analysis.	1 Kit	D5024
Methylated DNA Standards			
Universal Methylated Human DNA Standard	Human (male) genomic DNA having all CpG sites methylated. To be used for the evaluation of bisulfite-mediated conversion of DNA. Supplied with a control primer set.	1 Set	D5011
Universal Methylated Mouse DNA Standard	Mouse (male) DNA having all CpG sites methylated. To be used for the evaluation of bisulfite-mediated conversion of DNA. Supplied with a control primer set.	1 Set	D5012
Region-Specific DNA Methylation Screening			
OneStep qMethyl™ Kit	Single step real-time PCR procedure for bisulfite-free determination of DNA methylation status. Available without fluorescent dye for probe-based detection (Lite).	1 x 96 Rxns. 1 x 96 Rxns.	D5310 D5311 (Lite)
OneStep qMethyl™ Array	Premade 96-well assay for bisulfite-free determination of region-specific DNA methylation assessment in the promoter region of any one of the following prominent tumor suppressor genes: RASSF1, RARB, CDKN2A (p16), MGMT, or CCND2.	1 x 96 Rxns.	D5312
Epigenetics Services			
For more information, visit http://www.zymoresearch.com/services or inquire at services@zymoresearch.com .			
Services for Methylated DNA Analysis			
Simplify biomarker discovery with our 5-mC Analysis platforms that combine Zymo's well-established bisulfite technologies with next-generation sequencing for the most comprehensive DNA methylation analysis services available.			
Services for Hydroxymethylated DNA Analysis			
Novel genome-wide 5-hmC analysis platform featuring cutting-edge 5-hmC DNA enrichment, library prep, and next-generation sequencing technologies to ensure the sensitivity of 5-hmC detection in genome-wide context.			
Hydroxymethylation Detection			
Quest 5-hmC™ DNA Enrichment Kit	Featuring J-base binding protein (JBP) for the specific enrichment of 5-hmC containing DNA, the consolidated workflow makes the procedure reliable for robust analysis of multiple samples.	25 Rxns. 50 Rxns.	D5420 D5421
Quest 5-hmC™ DNA ELISA Kit	Streamlined workflow for both the direct and relative quantitation of 5-hmC, in a global genomic context, with a robust colorimetric readout.	1 x 96 Rxns. 2 x 96 Rxns.	D5425 D5426
Anti-5-Hydroxymethylcytosine Polyclonal Antibody	Polyclonal antibody has been engineered to maximize sensitivity to low amounts of hydroxymethylated gDNA while minimizing crossreactivity with unmodified or methylated cytosine residues. The antibody is suitable for use in ELISA, IP, and immunohistochemical labeling.	50 µg 200 µg	A4001-50 A4001-200
DNA Degradase™ DNA Degradase Plus™	Whole genomic DNA can be treated with these enzyme cocktails for processing to individual nucleotides (Degradase™) or nucleosides (Degradase Plus™) for interrogation in chromatographic and spectroscopic methods including TLC, LC/MS, MALDI-TOF, and more.	500 U 2000 U 250 U 1000 U	E2016 E2017 E2020 E2021
Other...			
ZymoTaq™ DNA Polymerase	ZymoTaq™ "hot start" DNA Polymerase is specifically designed for the amplification of "difficult" DNA templates including: bisulfite-treated DNA for methylation detection. The product generates specific amplicons with little or no by-product formation.	50 Rxns. 200 Rxns	E2001/E2001 (system) E2003/E2004 (premix)
Methylated-DNA IP Kit	IP with a highly specific anti-5-methylcytosine monoclonal antibody. Designed for the enrichment of 5-methylcytosine-containing DNA from any pool of fragmented genomic DNA for use in genome-wide methylation analysis.	10 Rxns.	D5101

ZYMO RESEARCH CORP.

 Phone: (949) 679-1190 ▪ Toll Free: (888) 882-9682 ▪ Fax: (949) 266-9452 ▪ info@zymoresearch.com ▪ www.zymoresearch.com