

## Certificate of Analysis

### EZ ChIP™ Chromatin Immunoprecipitation Kit

Catalog # 17-371

Lot # 31689

#### Kit Components

**Protein G Agarose/Salmon Sperm DNA**, Catalog # 16-201C, Lot # 31619. One vial containing **1.5ml** packed beads with **600µg** sonicated salmon sperm DNA, 1.5mg BSA and approximately 4.5mg recombinant Protein G. Provided as a 50% gel slurry for a final volume of **3ml** per vial. Suspended in TE buffer, pH 8.0, containing 0.05% sodium azide. Liquid suspension.

**ChIP Dilution Buffer**, Catalog # 20-153, Lot # 28801. One vial containing **24ml** of 0.01% SDS, 1.1% Triton X-100, 1.2mM EDTA, 16.7mM Tris-HCl, pH 8.1, 167mM NaCl.

**Low Salt Immune Complex Wash Buffer**, Catalog # 20-154, Lot # 28802. One vial containing **24ml** of 0.1% SDS, 1% Triton X-100, 2mM EDTA, 20mM Tris-HCl, pH 8.1, 150mM NaCl.

**High Salt Immune Complex Wash Buffer**, Catalog # 20-155, Lot # 28803. One vial containing **24ml** of 0.1% SDS, 1% Triton X-100, 2mM EDTA, 20mM Tris-HCl, pH 8.1, 500mM NaCl.

**LiCl Immune Complex Wash Buffer**, Catalog # 20-156, Lot # 28804. One vial containing **24ml** of 0.25M LiCl, 1% IGEPAL-CA630, 1% deoxycholic acid (sodium salt), 1mM EDTA, 10mM Tris, pH 8.1.

**TE Buffer**, Catalog # 20-157, Lot # 28805. Two vials, each containing **24ml** of 10mM Tris-HCl, 1mM EDTA, pH 8.0.

**0.5M EDTA**, Catalog # 20-158, Lot # 28806. One vial containing **250µl** of 0.5M EDTA, pH 8.0.

**5M NaCl**, Catalog # 20-159, Lot # 28807. One vial containing **500µl** of 5M NaCl.

**SDS Lysis Buffer**, Catalog # 20-163, Lot # 28800. One vial containing **10ml** of 1% SDS, 10mM EDTA, 50mM Tris, pH 8.1.

**1M Tris-HCl, pH 6.5**, Catalog # 20-160, Lot # 28808. One vial containing **500µl** of 1M Tris-HCl, pH 6.5.

**10X Glycine**, Catalog # 20-282, Lot # 31657. One vial containing **11ml** of 1.25M Glycine.

**10X PBS**, Catalog # 20-281, Lot # 27023. One vial containing **24ml** of 10X PBS.

**Protease Inhibitor Cocktail II**, Catalog # 20-283, Lot # 31687. Two vials, each containing **110µl** of 200X Protease Inhibitor Cocktail II in DMSO.

**RNase A**, Catalog # 20-297, Lot # 31674. One vial containing **600µg** of RNase A in **60µl** of sterile water.

**Proteinase K**, Catalog # 20-298, Lot # 31673. One vial containing **600µg** of Proteinase K in **60µl** of 50mM Tris-HCl, pH 8.0, 10mM CaCl<sub>2</sub>.

**1M NaHCO<sub>3</sub>**, Catalog # 20-296, Lot # 31659. One vial containing **600µl** of 1M NaHCO<sub>3</sub>.

**10X PCR Buffer**, Catalog # 20-295, Lot # 31658. One vial containing **200µl** of 750mM Tris-HCl, pH 8.8, 200mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.1% Tween<sup>®</sup>-20, 25mM MgCl<sub>2</sub>.

**Control Primers**, Catalog # 22-004, Lot # 31666. One vial containing **75µl** of 5µM of each control primer specific for human GAPDH.

FOR: 5'-TACTAGCGGTTTTACGGGCG-3'

REV: 5'-TCGAACAGGAGGAGCAGAGAGCGA-3'

**Anti-RNA Polymerase II, clone CTD4H8**, Catalog # 05-623B, Lot # 29634A. One vial containing **25µg** of Anti-RNA Polymerase II, clone CTD448.

**Normal Mouse IgG**, Catalog # 12-371B, Lot # 29699A. One vial containing **25µg** of normal mouse IgG.

**20% SDS**, Catalog # 20-280, Lot # 31656. One vial containing **242µl** of 20% SDS.

**Spin Filters**, Catalog # 20-290, Lot # 27137. One bag containing 22 Spin Filters in Collection Tubes.

**Collection Tubes**, Catalog # 20-291, Lot # 27138. One bag containing 22 Collection Tubes.

**Bind Reagent A**, Catalog # 20-292, Lot # 27139. One vial containing **25ml** of Bind Reagent A.

**Wash Reagent B**, Catalog # 20-293, Lot # 27140. One vial containing **12.5ml** of Wash Reagent B.

**Elution Reagent C**, Catalog # 20-294, Lot # 27141. One vial containing **1.5ml** of Elution Reagent C.

**FOR IN VITRO RESEARCH USE ONLY.  
NOT RECOMMENDED OR INTENDED FOR DIAGNOSIS OF DISEASE IN HUMANS.  
DO NOT USE IN HUMANS.**

### **Kit Description**

**Quantity:** Two boxes containing the necessary reagents to perform 22 chromatin immunoprecipitation (ChIP) assays. This kit also contains reagents to generate chromatin from ten 10-cm plates to allow for multiple immunoprecipitations from the same chromatin preparation.

**Storage and Stability:** Upon receipt, store components at the temperatures indicated on the labels. Kit components are stable for 1 year from date of shipment when stored as directed.

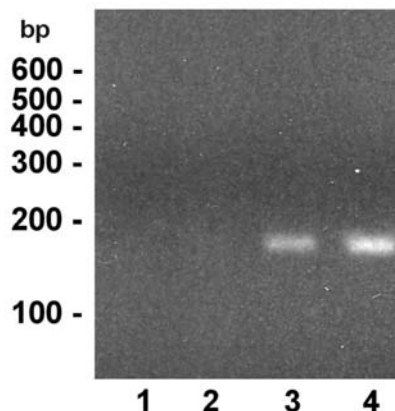
**Use:** The EZ ChIP™ kit contains reagents optimized for immunoprecipitation of chromatin from mammalian cells, including controls to ensure successful performance of this assay. Detection of the DNA region, gene or promoter of interest in immunoprecipitated chromatin must be empirically determined by the researcher. Quantitative PCR using promoter-specific primers is recommended. The EZ ChIP™ kit has all the necessary buffers and reagents to perform successful chromatin immunoprecipitation assays. However, careful attention must be paid to the details of the instructions. Follow all instructions carefully, especially with regard to incubation times and temperatures.

**Please refer to the Instruction Manual for further information and a detailed assay protocol.**

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### **Quality Control Testing**

PCR Analysis of Chromatin Immunoprecipitation: Chromatin immunoprecipitation was performed using chromatin from HeLa cells and either anti-RNA Polymerase II (Catalog # 05-623) or Normal Mouse IgG (Catalog # 12-371) as the immunoprecipitating antibody. Purified DNA was then analyzed by PCR using Control Primers specific for the GAPDH promoter. PCR product was observed in the anti-RNA Polymerase II ChIP (lane 3) and not in the Normal Mouse IgG ChIP (lane 2). GAPDH promoter specific DNA was also observed in the Input (lane 4) and not in the "No DNA" PCR control (lane 1).



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### **General References:**

1. Das, P.M., *et al.*, Biotechniques **37**: 961-969, 2004.
2. Luo, R.X., *et al.*, Cell **92**: 463-473, 1998.
3. Braunstein, M., *et al.*, Mol. Cell. Biol. **16**: 4349-4356, 1996.
4. Buck, M.J. and Lieb, J.D., Genomics **83**: 349-360, 2004.
5. Bernstein, B.E., *et al.*, Methods Enzymol. **376**: 349-360, 2004.
6. Weinmann, A.S., *et al.*, Genes Dev. **16**: 235-244, 2002.
7. Manabe, I., *et al.*, J. Clin. Invest. **107**: 823-834, 2001.
8. Cervoni, N. and Szyf, M., J. Biol. Chem. **276**: 40778-40787, 2001.