

## SUPPORTING INFORMATION

### **The *Bis*-Electrophile Diepxybutane Cross-links DNA to Human Histones but Does Not Result in Enhanced Mutagenesis in Recombinant Systems**

Elisabeth M. Loecken, Surendra Dasari, Salisha Hill, David L. Tabb,  
and F. Peter Guengerich

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#### CONTENTS

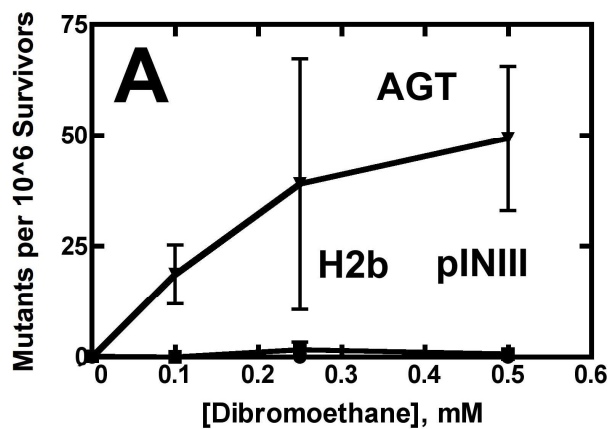
**Table S1.** Histone proteins identified in two independent screens for cross-link candidates.

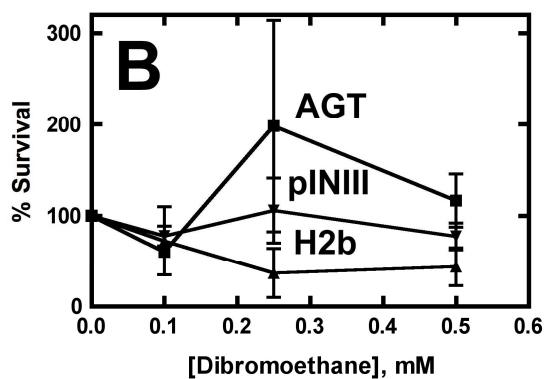
**Figure S2.** Mutagenicity and survivorship in TRG8 cells expressing AGT, H2b, or containing pINIII vector treated with 1,2-dibromoethane.

**Figure S3.** Cross-linking of purified histone H2b to single-stranded or double-stranded oligonucleotides by diepxybutane.

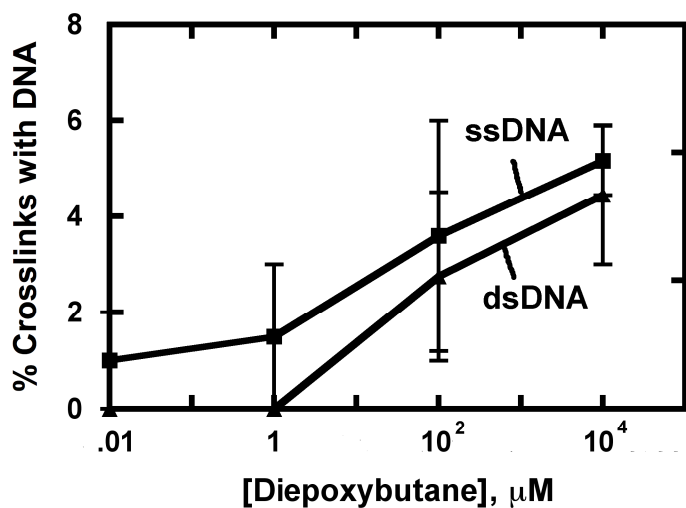
**Table S1.** Histone proteins identified in two independent screens for cross-link candidates.

<b>Histone Protein</b>	<b>Uniref100 ID</b>	<b>% Coverage</b>
Histone H2A.m	P04908	41
Histone H3/b	Q93081	13
Hisonte H4	Q6FGB8	17
Histone protein	Q5R2W0	27
Histone 1, H2aj	Q5JXQ5	14
Histone 4	Q4A487	22
Core histone macro-H2A.1	O75367	11
Histone protein	Q5R2W0	38
Histone H3/b	Q93081	20
Histone H4	Q6FGB8	50
Histone H2A.m	P04908	36





**Figure S2.** Mutagenicity (S2A) and survivorship (S2B) in TRG8 cells (expressing AGT or histone H2b or containing pINIII vector treated) with 1,2-dibromoethane for 30 min at 37 °C before growing the cells on *his*<sup>+</sup> and *his*<sup>-</sup> plates.



**Figure S3.** Cross-linking of purified histone H2b to single-stranded or double-stranded oligonucleotides by diepoxybutane. Gel shift assays were performed by incubating histone H2b (1 μg) with <sup>32</sup>P-5'-end-labeled 16-mer single-stranded or double-stranded oligonucleotides in reactions containing various concentrations of diepoxybutane overnight at 37 °C. Samples were separated by SDS-polyacrylamide gel (15% w/v) electrophoresis and DNA-protein cross-links were detected via autoradiography and quantified using Quantity One software (BioRad).