

TREVIGEN® Product Data

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8-oxo-dG Oligonucleotide and Complement A

Catalog #: 3850-100-OL

Contents: 8-oxo-dG Oligonucleotide (cat# 3850-100-01) **Size:** 100 pmol
 Oligo Complement A (cat# 3849-100-01) 100 pmol

Description: A synthetic oligonucleotide containing an 8-oxoguanine adduct that is suitable as a substrate for the assay of *E. coli* Fpg (REC buffer 10) or human OGG (REC buffer 6 Cat#3900-500-06) activity when hybridized to its complementary oligonucleotide. The oligonucleotides may be conveniently radiolabeled with γ -³²P-ATP and polynucleotide kinase.

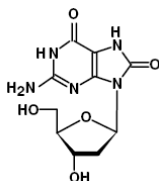
Sequence: 5' GAACTAGTGOATCCCCCGGGCTGC 3' (cat# 3850-100-01)
 3' CTTGATCACCTAGGGGGCCCGACG 5' (cat# 3849-100-01)
 where O is 8-oxoguanine.

Assay Conditions: For *E. coli* Fpg: 1X REC™ Buffer 10 (10 mM HEPES-KOH (pH 7.4), 100 mM KCl, 10 mM EDTA, and 0.1 mg/ml BSA), 1 pmole 8-oxo-dG Oligonucleotide (Cat# 3850-100-01) labeled with ³²P, 1 pmole Oligo Complement A (Cat# 3849-100-01), and serial dilutions of enzyme in a 20 μ l reaction volume are incubated for 1 hour at 37°C. For analysis, 10 μ l of 3X REC Alkaline Loading Buffer (Cat# 4017-500: 300 mM NaOH, 97% formamide, and 0.2% bromophenol blue) are added, the samples are heated to 95°C for 10 minutes then fast cooled to 4°C, and the cleavage products are resolved by 20% denaturing polyacrylamide gel electrophoresis. The bands are cut out and radioactivity is counted to quantify the cleavage products. (10X REC Buffer 10, Cat# 3900-500-10, is available separately.)

Storage Conditions: Store at -20°C in a manual defrost freezer. For long term storage, freeze in working aliquots at -80°C.

References:

1. Tchou, J., V. Bodepudi, S. Shibutani, I. Antoshechkin, J. Miller, A.P. Grollman, and F. Johnson. 1994. Substrate specificity of Fpg protein: recognition and cleavage of oxidatively damaged DNA. *J Biol Chem* **269**:15318-15324.
2. Friedberg, E.C., G.C. Walker, and W. Siede. 1995. DNA Repair Mutagenesis, American Society of Microbiology, Washington, D.C.: AMS Press.



8-hydroxyguanine

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