

# TREVIGEN® Product Data

For Research Use Only. Not For Use In Diagnostic Procedures

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## Human Poly(ADP-Ribose) Polymerase (PARP): High Specific Activity

Catalog #: 4668-02K-01

Size: 20,000 Units

**Description:** Poly ADP-ribosylation by PARP of nuclear proteins is a posttranslational event that occurs in response to DNA damage. PARP inhibition prevents tissue damage in animal models of myocardial and neuronal ischemia, diabetes, septic shock, and vascular stroke. High specific activity PARP is recommended for detailed studies and drug discovery applications and used in Trevigen's PARP Assay Kits (e.g. cat#s 4677-096-K; 4684-096-K; 4690-096-K). Other applications include Western blot analysis of PARP in cell extracts.

**Source:** Purified from *E. coli* containing a recombinant plasmid harboring the human PARP gene.

**Unit Definition:** One unit of PARP incorporates 10 femtomoles of NAD onto immobilized histones in 30 minutes. High specific activity PARP is provided at 10 units/ $\mu$ l.

**Storage Buffer:** 20 mM Tris-Cl (pH 8.0), 200 mM NaCl, 1 mM DTT, 0.1% Triton X-100, 50% glycerol, and 0.1 mg/ml BSA.

**Storage Conditions:** The enzyme retains over 66% of its activity after 24 hr at 37°C. Store at -20°C in a manual defrost freezer. For long-term storage, freeze in working aliquots at -80°C. Avoid freeze-thaw cycles.

### References:

1. Satoh, M.S. and T. Lindahl. 1994. Role of poly(ADP-ribose) formation in DNA repair. *Nature* **356**:356-358.
2. Lautier, D., J. Lagueux, J. Thibodeau, L. Menard, and G.G. Poirier. 1993. Molecular and biochemical features of poly(ADP-ribose) metabolism. *Mol Cell Biochem* **122**:171-193.
3. Curtin NJ. 2005. PARP inhibitors for cancer therapy. *Expert Rev Mol Med*. **7**:1-20.
4. Kim MY, Mauro S, Gevry N, Lis JT, Kraus WL. 2004. NAD-Dependent Modulation of Chromatin Structure and Transcription by Nucleosome Binding Properties of PARP-1. *Cell* **119**:803-814.
5. Virag, L., and Szabo, C. 2002. The therapeutic potential of Poly(ADP-Ribose) Polymerase inhibitors. *Pharmacological Reviews* **54**:375-429.

**Lot Specific Data:** see reverse

**TREVIGEN®**

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## Related Products Available From Trevigen

Catalog #	Description	Size
4668-100-01	Recombinant Human PARP (High Specific Activity)	1000 Units
4667-250-EB	Recombinant Human PARP Enzyme	250 $\mu$ l
4520-096-K	PARP in vivo Pharmacodynamic Assay II	96 tests
4676-096-K	HT Universal Chemiluminescent PARP Assay Kit/w Histone Coated Strip Wells	96 Samples
4677-096-K	HT Universal Colorimetric PARP Assay Kit/w Histone Coated Strip Wells	96 Samples
4684-096-K	HT Colorimetric PARP Apoptosis Assay	96 tests
4685-096-K	HT Chemiluminescent PARP Apoptosis Assay	96 tests
4690-096-K	HT F Homogeneous PARP Inhibition Assay Kit	96 tests
4682-096-K	HT Chemiluminescent PARG Assay Kit	96 tests
4683-096-K	HT Colorimetric PARG Assay Kit	96 tests
4667-50-03	3-Aminobenzamide PARP inhibitor (200 mM)	60 $\mu$ l
4667-50-11	Benzamide PARP inhibitor (8 mM)	100 $\mu$ l
4667-50-10	6(SH)-Phenanthridinone PARP inhibitor (160 $\mu$ M)	100 $\mu$ l
4667-50-9	4-Amino-1,8-naphthalimide PARP inhibitor (800 $\mu$ M)	100 $\mu$ l

Lot Specific Data:  
 Protein:  
 Units:  
 Specific Activity:

**Human PARP**  
**High Specific Activity**  
 Catalog #: 4668-02K-01  
 Storage: -80 °C

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