

TREVIGEN® Product Data

For Research Use Only. Not For Use In Diagnostic Procedures

Poly(ADP-ribose) glycohydrolase (PARG)

Catalog #: 4680-096-01

Size: 300 µl

Concentration: 1 µg/ml

Description: Poly(ADP-ribose) glycohydrolase (PARG) degrades poly(ADP-ribose) (PAR) polymers synthesized by poly(ADP-ribose) polymerase (PARP-1). PARG is ideal for use as a positive control in Trevigen's PARG Assay Kit (Cat# 4682-096-K and 4683-096-K) and in Western blot analysis of PARG in cell extracts.

Source: Purified from *E. coli* containing a recombinant plasmid harboring the catalytic domain of the bovine PARG gene.

Storage Buffer: 20 mM KPO₄ (pH 7.2), 50 mM KCl, 0.1 mg/ml BSA, 0.1% Triton® X-100, 1 mM DTT, 50% Glycerol.

Measurement of Activity: PARG activity is measured by the loss of biotinylated PAR from histones attached to the wells of a 96 well plate.

Assay Conditions: The reaction (50 µl) takes place in wells of a 96 well plate to which is attached biotin-conjugated-poly(ADP) ribosylated histones, and consists of 20 mM Potassium Phosphate (pH 7.4), 50 mM KCl, 0.1 mg/ml BSA, 0.1% Triton® X-100, and serial dilutions of PARG. Incubation is for 30 minutes at 22-23°C. The loss of biotinylated poly(ADP-ribose) is quantified by incubation with Streptavidin-HRP followed by addition of a colorimetric HRP substrate and measurement of the absorbance at 450 nm. A PARG concentration of 10-25 ng/ml will cleave 50% of the PAR under these conditions.

Storage Conditions: Stable for at least one year when stored at -20 °C.

References:

1. Koh DW, Dawson VL, Dawson TM. 2005. The road to survival goes through PARG. *Cell Cycle*. 4:397-399.
2. Oei SL, Keil C, Ziegler M. 2005. Poly(ADP-ribosylation) and genomic stability. *Biochem Cell Biol*. 83:263-269.
3. Cuzzocrea S, Wang ZQ. 2005. Role of poly(ADP-ribose) glycohydrolase (PARG) in shock, ischemia and reperfusion. *Pharmacol Res*. 52:100-108.
4. Bonicalzi ME, Haince JF, Droit A, Poirier GG. 2005. Regulation of poly(ADP-ribose) metabolism by poly(ADP-ribose) glycohydrolase: where and when? *Cell Mol Life Sci*. 62:739-750.
5. Patel NS, Cortes U, Di Poala R, Mazzon E, Mota-Filipe H, Cuzzocrea S, Wang ZQ, Thiemermann C. 2005. Mice lacking the 110-kD isoform of poly(ADP-ribose) glycohydrolase are protected against renal ischemia/reperfusion injury. *J Am Soc Nephrol*. 16:712-719.
6. Patel CN, Koh DW, Jacobson MK, Oliveira MA. 2005. Identification of three critical acidic residues of poly(ADP-ribose) glycohydrolase involved in catalysis: determining the PARG catalytic domain. *Biochem J*. 388:493-500.

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PARG

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