



Product Information

MONOCLONAL ANTI-POLY(ADP-RIBOSE) POLYMERASE ANTIBODY, CLONE C-2-10

Mouse Ascites Fluid

Product Number **P-248**

Product Description

Monoclonal Anti-Poly(ADP-Ribose) Polymerase Antibody (mouse IgG1) is produced by immunizing mice with purified calf thymus poly(ADP-ribose) polymerase as the antigen.

This antibody recognizes a 116 kDa protein which corresponds to PARP and the 85 kDa apoptosis-induced cleavage product of prICE (proteinase resembling interleukin 1 β -converting enzyme) and CPP32 (cysteine protease). Recognizes PARP from mouse, rat, hamster and primate sources, but fails to detect avian PARP.

Poly(ADP-ribose) polymerase (PARP) is a eukaryotic nuclear protein involved in differentiation, DNA repair, and chromatin structure formation. During the process of programmed cell death, or apoptosis, the cell undergoes distinct morphological changes which include shrinkage, membrane blebbing, and nuclear reorganization. Several members of the interleukin 1 β -converting enzyme (ICE)/ced-3 family of proteinases, or caspases, are activated in a cascade of cleavage events which leads to the degradation of critical cellular substrates. PARP contains a conserved proteinase recognition site, DEVD((single letter code for amino acids), which is known to be a target for several caspases including prICE (proteinase resembling ICE) and CPP32/YAMA. Other nuclear events that are concurrent with PARP cleavage during apoptosis is activation of the domain nuclease and fragmentation nuclease which cleave DNA into >50 kb and nucleosome-sized fragments, respectively.

Reagents

Monoclonal Anti-Poly(ADP-Ribose) Polymerase Antibody is provided as mouse ascites containing 0.05% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the

attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Recommended starting titer for Monoclonal Anti-Poly(ADP-Ribose) Polymerase Antibody is 1:2,000 for immunoblotting, and 1:1,000 for immunocytochemistry. However, optimal working concentration should be determined by serial dilutions.

References

1. Budihardjo, I.I. et al. "Apparent cleavage of poly(ADP-ribose) polymerase in non-apoptotic mouse LTA cells: an artifact of cross-reactive secondary antibody." *Mol. Cell Biochem.* **178**, 245-249 (1998).
2. Simbulan-Rosenthal, C.M. et al. "The expression of poly(ADP-ribose) polymerase during differentiation-linked DNA replication reveals that it is a component of the multiprotein DNA replication complex." *Biochemistry* **35**, 11622-11633 (1996).
3. Giner, H. et al. "Overproduction and large-scale purification of the human poly(ADP-ribose) polymerase using a baculovirus expression system." *Gene* **114**, 279-283 (1992).
4. Lamarre, D. et al. "Structural and functional analysis of poly(ADP ribose) polymerase: an immunological study." *Biochim. Biophys. Acta* **950**, 147-160 (1988).

SMS 6/00

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.