



DB078: PARP (N20)

Background:

PARPs, Poly (ADP-ribose) polymerases, are a group of protein-modifying and nucleotide-polymerizing enzymes able to catalyze the transfer of multiple ADP-ribose units from NAD to substrate proteins (1). Known family members are PARP (PARP-1), PARP-2, PARP-3, vPARP, tankyrase 1 and tankyrase, the most studied being PARP (1). While it is well established that PARP hyperactivation after excessive DNA damage and energy failure leads necrotic cell death, new evidence suggests that PARP is actively involved in apoptosis (2&3). Some data suggests that PARP activation signals AIF (apoptosis inducing factor) release from mitochondria, resulting in programmed cell death using a pathway independent of the caspases (4).

Origin:

PARP (N20) is provided as an affinity purified rabbit polyclonal antibody, raised against a peptide mapping to the amino terminal domain of human PARP.

Product Details:

Each vial contains 200 µg/ml of affinity purified rabbit IgG, PARP (N20) DB078, in 1 ml PBS containing 0.1 % sodium azide and 0.2% gelatin.

Competition Studies:

A blocking peptide is also available, DB078P, for use in competition studies. Each vial contains 100 µg of peptide in 0.5 ml PBS with 0.1% sodium azide and 100 µg BSA.

Specificity:

PARP (N20) is recommended to detect mouse, rat and human PARP by western blotting, immunoprecipitation, and immunohistochemistry (including paraffin-embedded tissues). Recommended western blotting starting dilution 1:400. Reactive with the 112 KD and 85 KD fragments.

Storage:

Store this product at 4° C, do not freeze. The product is stable for one year from the date of shipment.

References:

1. Meli E, Pangallo M, Baronti R, Chiarugi A, Cozzi A, Pellegrini-Giampietro DE, Moroni F. 2003. Poly(ADP-ribose) polymerase as a key player in excitotoxicity and post-ischemic brain damage. *Toxicol Lett* 139(2-3):153-162.
2. Chiarugi A. 2002. Poly(ADP-ribose) polymerase: killer or conspirator? The 'suicide hypothesis' revisited. *Trends Pharmacol Sci* 23(3):122-129.
3. Nicoletti VG, Stella AM. 2003. Role of PARP under stress conditions: cell death or protection? *Neurochem Res* 28(2):187-194.
4. Yu SW, Wang H, Poitras MF, Coombs C, Bowers WJ, Federoff HJ, Poirier GG, Dawson TM, Dawson VL. 2002. Mediation of poly(ADP-ribose) polymerase-1-dependent cell death by apoptosis-inducing factor. *Science* 297(5579):259-263.

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