

Store at  
-20°C

## Parthanatos Antibody Sampler Kit

#26768



Support: +1-978-867-2388 (U.S.)  
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Orders: 877-616-2355 (U.S.)  
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For Research Use Only. Not For Use In Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt.	Isotype/Source
PARP (46D11) Rabbit mAb	9532	20 µL	116, 89 kDa	Rabbit
AIF (D39D2) XP® Rabbit mAb	5318	20 µL	67 kDa	Rabbit IgG
MIF (E8S8H) Rabbit mAb	75038	20 µL	12 kDa	Rabbit IgG
Poly/Mono-ADP Ribose (E6F6A) Rabbit mAb	83732	20 µL		Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µL		Goat

See [www.cellsignal.com](http://www.cellsignal.com) for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

**Description:** The Parthanatos Antibody Sampler Kit provides an economical means of detecting the activation of parthanatos. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

**Background:** Parthanatos is a form of regulated cell death that follows a multistep cascade and is triggered by the accumulation of poly (ADP-ribose) (PAR). When PAR polymerase-1 (PARP-1) is overactivated under certain conditions, excessive PAR is produced and binds to apoptosis-inducing factor (AIF). As a result, AIF is released from the mitochondria and forms a complex with macrophage migration inhibitory factor (MIF). Subsequently, the AIF/MIF complex is translocated to the nucleus where MIF cleaves genomic DNA into large fragments, and cell death follows (1-3). Studies have found that parthanatos is involved in the pathogenesis of many diseases, particularly neurodegenerative disorders, such as Alzheimer's disease, Huntington's disease, Parkinson's disease, and amyotrophic lateral sclerosis (ALS) (4-7).

**Specificity/Sensitivity:** Each antibody in the Parthanatos Antibody Sampler Kit detects endogenous levels of its target protein. PARP (46D11) Rabbit mAb detects endogenous levels of total full-length PARP-1 and the large fragment (89 kDa) produced by caspase cleavage at Asp214. This antibody does not cross-react with PARP-2 or PARP-3. Poly/Mono-ADP Ribose (E6F6A) Rabbit mAb recognizes endogenous levels of ADP-ribosylated proteins and does not cross-react with other post-translational modifications.

**Source/Purification:** Monoclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to residues surrounding Gly623 of human PARP-1, Ala520 of human AIF, and Tyr100 of human MIF protein, or with KLH modified on lysines with ADP ribose.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA, 50% glycerol, and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibodies.*

Please visit [www.cellsignal.com](http://www.cellsignal.com) for validation data and a complete listing of recommended companion products.

#### Background References:

- (1) Fatokun, A.A. et al. (2014) *Br J Pharmacol* 171, 2000-16.
- (2) Wang, Y. et al. (2016) *Science* 354, aad6872. doi: 10.1126/science.aad6872.
- (3) Liu, L. et al. (2022) *Cell Mol Life Sci* 79, 60.
- (4) Park, H. et al. (2020) *Int Rev Cell Mol Biol* 353, 1-29.
- (5) Wang, X. and Ge, P. (2020) *Neuroscience* 449, 241-250.
- (6) Zhou, Y. et al. (2021) *Pharmacol Res* 163, 105299.
- (7) Thapa, K. et al. (2021) *Life Sci* 267, 118975.

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