

#5939
 Store at -20°C

AIF (D39D2) XP® Rabbit mAb (Sepharose® Bead Conjugate)


Cell Signaling
 TECHNOLOGY®

Orders: 877-616-CELL (2355)
 orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
 cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IP	H M R Mk	Endogenous	67	Rabbit IgG	#O95831	9131

Product Usage Information	Application	Dilution
	Immunoprecipitation	1:20
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
Specificity / Sensitivity	AIF (D39D2) XP® Rabbit mAb (Sepharose® Bead Conjugate) recognizes endogenous levels of total AIF protein.	
Species predicted to react based on 100% sequence homology:	Bovine, Dog	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala520 of human AIF protein.	
Product Description	This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sepharose® beads. AIF (D39D2) XP® Rabbit mAb (Sepharose® Bead Conjugate) is useful for the immunoprecipitation of AIF. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated AIF (D39D2) XP® Rabbit mAb #5318.	

MW (kDa)

67

Background	Apoptosis-inducing factor (AIF, PDCD8) is a ubiquitously expressed flavoprotein that plays a critical role in caspase-independent apoptosis (reviewed in 1,2). AIF is normally localized to the mitochondrial intermembrane space and released in response to apoptotic stimuli (3). Treatment of isolated nuclei with recombinant AIF leads to early apoptotic events, such as chromatin condensation and large-scale DNA fragmentation (3). Studies of AIF knockout mice have shown that the apoptotic activity of AIF is cell type and stimuli-dependent. Also noted was that AIF was required for embryoid body cavitation, representing the first wave of programmed cell death during embryonic morphogenesis (4). Structural analysis of AIF revealed two important regions, the first having oxidoreductase activity and the second being a potential DNA binding domain (3,5). While AIF is redox-active and can behave as an NADH oxidase, this activity is not required for inducing apoptosis (6). Instead, recent studies suggest that AIF has dual functions, a pro-apoptotic activity in the nucleus via its DNA binding and an anti-apoptotic activity via the scavenging of free radicals through its oxidoreductase activity (2,7).
Background References	1. Daugas, E. et al. (2000) <i>FEBS Lett</i> 476, 118-23. 2. Lipton, S.A. and Bossy-Wetzel, E. (2002) <i>Cell</i> 111, 147-50. 3. Susin, S.A. et al. (1999) <i>Nature</i> 397, 441-6. 4. Joza, N. et al. (2001) <i>Nature</i> 410, 549-54. 5. Ye, H. et al. (2002) <i>Nat Struct Biol</i> 9, 680-4. 6. Miramar, M.D. et al. (2001) <i>J Biol Chem</i> 276, 16391-8. 7. Klein, J.A. et al. (2002) <i>Nature</i> 419, 367-74.

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	IP: Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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