

# Produktinformation



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# Zuschläge

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# Product Information



### **AIF Blocking Peptide**

Item No. 360773

Apoptosis-inducing factor (AIF) is a highly conserved mitochondrial protein roles in redox-biochemistry and apoptosis.<sup>1,2</sup> Apoptosis is a controlled process of cell death necessary for proper physiological development and maintenance. Loss of mitochondrial membrane potential results in the release of several proteins critical to the acceleration of apoptosis.<sup>3</sup> When AIF is released from the mitochondrial intermembrane space it migrates to the nucleus to initiate chromatin condensation and DNA cleavage.<sup>4-6</sup> AIF is recognized by immunoblotting at 67 kDa in most tissues and cell lines.

#### Laboratory Procedures

This vial contains 200 µg peptide derived from amino acids 151-180 of human AIF. The AIF blocking peptide can be used in conjunction with Cayman's AIF Polyclonal Antibody (Item No. 160773) to block protein-antibody complex formation during immunochemical analysis of AIF.

Reconstitute the lyophilized peptide with 200 µl of PBS or distilled water. Store this peptide solution at -20°C. It should be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

- 1. Mix the AIF Polyclonal Antibody (Item No. 160773) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 100 µl of antibody and 100 µl of peptide.\*
- 2. Incubate for one hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
- 3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

\*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

#### References

- 1. Lorenzo, H.K., Susin, S.A., Penninger, J., et al. Apoptosis inducing factor (AIF): a phylogenetically old, caspaseindependent effector of cell death. Cell Death and Differentiation 6, 516-524 (1999).
- Joza, N., Susin, S.A., Daugas, E., et al. Essential role of the mitochondrial apoptosis-inducing factor in programmed 2. cell death. Nature 410, 549-554 (2001).
- 3. Green, D.R. and Reed, J.C. Mitochondria and apoptosis. Science 281, 1309-1312 (1998).
- Susin, S.A., Lorenzo, H.K., Zamzami, N., et al. Molecular characterization of mitochondrial apoptosis-inducing factor. Nature 397, 441-446 (1999).
- 5. Susin, S.A., Zamzami, N., Castedo, M., et al. Bcl-2 inhibits the mitochondrial release of an apoptogenic protease. J. Exp. Med. 184, 1331-1341 (1996).
- Daugas, E., Susin, S.A., Zamzami, N., et al. Mitochondrio-nuclear translocation of AIF in apoptosis and necrosis. 6. FASEB J. 14, 729-739 (2000).

#### **Related Products**

For a list of related products please visit: www.caymanchem.com/catalog/360773

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#### WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution

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