

Certificate of Analysis

Product: IgG Fraction of Anti-Apoptosis Inducing Factor (AIF) [Rabbit]

Code: 200-401-985

Lot # 19036

Size: 100 µg

Physical State: Liquid (sterile filtered)

Protein Concentration: 0.5 mg/ml (by UV absorbance at 280 nm)

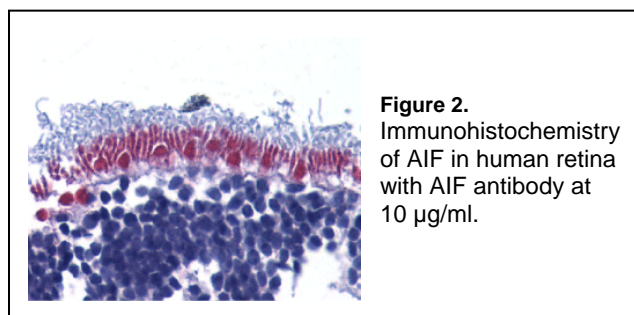
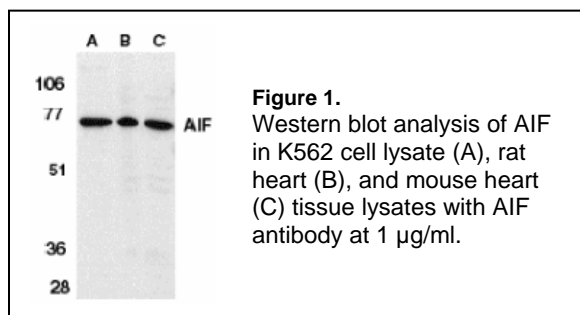
Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Stabilizer: None

Preservative: 0.02% (w/v) Sodium Azide

Storage Conditions: Store vial at -20° C or below prior to opening. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening product.

Background Information: Apoptosis is characterized by several morphological nuclear changes including chromatin condensation and nuclear fragmentation. These changes are triggered by the activation of members of the caspase family, caspase activated DNase, and several novel proteins (1). A novel gene, the product of which causes chromatin condensation and DNA fragmentation, was recently identified, cloned, and designated apoptosis inducing factor (AIF) (2). Like cytochrome c and caspase-9, which are critical molecules in apoptosis, AIF localizes to mitochondria. AIF translocates to the nucleus when apoptosis is induced and induces mitochondria to release the apoptogenic proteins cytochrome c and caspase-9. AIF induces chromatin condensation and large scale DNA fragmentation, which are the hallmarks of apoptosis. These effects occur in both isolated nuclei and in the nuclei of live cells treated by microinjection and with apoptosis stimuli (2,3). AIF is highly conserved between human and mouse and is widely expressed (2).



Application Note(s): This antibody has been tested for use in western blotting and immunohistochemistry. K562 cell lysate, as well as rat and mouse heart tissue lysates, can be used as positive controls in western blotting, and a band at approximately 67 kDa is expected. Specific conditions for reactivity should be optimized by the end user.

Recommended Dilutions:

ELISA	User Optimized
WESTERN BLOT	0.25-1 µg/ml
IMMUNOHISTOCHEMISTRY	10 µg/ml
OTHER APPLICATIONS	User Optimized

Purity and Specificity: This antibody is directed against human AIF protein. The product was purified from monospecific antiserum by DEAE ion exchange chromatography. A BLAST analysis was used to suggest cross-reactivity with AIF protein from mouse and rat based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.

Immunogen: This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids at an internal region of human AIF protein.

Relevant Links:

NCBI [O95831](#) Swiss-Prot [O95831](#)

Related Product(s):

#W10-000-T014	Normal Mouse Heart Whole Cell Lysate (500ug)
#W12-000-T087	Normal Rat Heart Whole Cell Lysate (500ug)
#611-703-127	Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10
#611-132-122	IRDye® 800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10
#B501-0500	BLOTTO (500 g)
#BSA-30	30% BOVINE SERUM ALBUMIN SOL'N in 0.85% sodium chloride (no preservative or stabilizer) (500 ml)
# B304	NORMAL GOAT SERUM (NGS) (10 ml)
#KIA-003	MaxTag™ Anti-RABBIT IgG Kit for Immunoblotting
#MB-070	Blocking Buffer for Fluorescent Western Blotting

General References:

1. Zamzami N, Kroemer G (1999) Condensed matter in cell death. *Nature* **401**:127-128.
2. Susin SA, Lorenzo HK, Zamzami N, *et al.* (1999) Molecular characterization of mitochondrial apoptosis-inducing factor. *Nature* **397**:441-446.
3. Daugas E, Susin SA, Zamzami N, *et al.* (2000) Mitochondrio-nuclear translocation of AIF in apoptosis and necrosis. *FASEB J.* **14**:729-739.

USDA Certification: All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.