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ProductInformation

Monoclonal Anti-IFI-16
Clone IFI-230
Purified Mouse Immunoglobulin

Product Number **I 1659**

Product Description

Monoclonal Anti-IFI-16 (mouse IgG1 isotype) is derived from the IFI-230 hybridoma produced by the fusion of mouse myeloma cells (NS1) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 768-783 at the C-terminus of human IFI-16. The isotype is determined using Sigma ImmunoType™ Kit (Sigma ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-IFI-16 recognizes human IFI-16. The antibody can be used in ELISA, immunoprecipitation, immunoblotting (85-95 kDa representing a cluster of three proteins: IFI-16A, -16B, -16C), and immunocytochemistry.

Interferon (IFN)-Inducible 16 (IFI-16) protein belongs to a family of HIN-200 (Hematopoietic Interferon-inducible Nuclear antigens with 200 amino acid repeats) human and mouse proteins. IFI-16 is a nuclear protein that contains regulatory domains such as: DNA binding domain, transcriptional regulatory domain and DAPIN/PAAD domain. IFI-16 migrates on SDS-PAGE as a cluster of three isotypes A, B, and C (85-95 kDa). These three isotypes arise as a result of mRNA alternative splicing. The longest isoform is IFI-16A that contains 785 amino acids, IFI-16B contains 729 amino acids, and IFI-16C contains 673 amino acids. All the isotypes are phosphorylated on serine and threonine residues and can homo- and heterodimerize.[1-3] The expression of the protein is restricted to the nuclei of hematopoietic cells, fibroblasts, and epithelial cells.[1, 4] IFI-16 expression in hematopoietic cells of the myeloid lineage is tightly regulated and highly induced in the differentiation and proliferation of the cell. Due to its localization in the nucleus, regulation of protein expression, and ability to bind DNA, it is assumed that IFI-16 has a role in transcription regulation of cell differentiation. In addition, it was found that IFI-16 can act as a transcriptional repressor and is involved in regulation and activation of p53 in cancer cells.[1-3, 5]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1 mg/mL

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 0.5-1 µg/mL is recommended using a whole extract of the cultured Jurkat cell line (human acute T cell leukemia).

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Johnstone, R.W., et al., Biochemistry, **37**, 11924-11931 (1998).
2. Johnstone, R.W., et al., J. Biol. Chem., **273**, 17172-17177 (1998).
3. Kwak, J.C., et al., J. Biol. Chem., **278**, 40899-40904 (2003).
4. Wei, W., Histochem. Cell Biol., **119**, 45-54 (2003).
5. Fujiuchi, N., J. Biol. Chem., **279**, 20339-20344 (2004).

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