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ProductInformation

Anti-FOXA1
produced in rabbit, IgG fraction of antiserum

Catalog Number **F1555**

Synonym: Anti-Forkhead box A1

Product Description

Anti-FOXA1 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 441-459 of human FOXA1 (GeneID: 3169), conjugated to KLH via a N-terminal cysteine residue. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-FOXA1 specifically recognizes human FOXA1 by immunoblotting (50 kDa) and indirect immunofluorescence. Staining of the FOXA1 band in immunoblotting is specifically inhibited by the immunizing peptide.

The Superfamily of Forkhead transcription factors (FOX) consists of more than 100 members, with orthologues expressed in a variety of species ranging from yeast to man. They are characterized by a common Forkhead (or Winged Helix) domain, a variant of the helix-turn-helix motif. Forkhead family members have been shown to play key regulatory roles in embryogenic development, differentiation, apoptosis and tumorigenesis.[1] The FOXA subfamily is composed of the transcription factors FOXA1, FOXA2 and FOXA3. They were initially known as regulators of hepatic genes, such as transthyretin, antitripsin, albumin and α-fetoprotein and named hepatocyte nuclear factor 3-α, β, and γ, respectively.[2, 3] Since then, they have been shown to have roles in differentiation of pancreas, liver and prostate.[4-6] FOXA1 and FOXA2 have been shown to regulate the transcription of several murine and human prostate specific genes involved in differentiated function by interacting with DNA promoter sequences and androgen receptors. Specifically, FOXA1 plays a crucial role in prostate ductal morphogenesis.[5, 6] FOXA1 is a crucial partner in events that lead to breast cancer progression in connection with estrogen receptor (ER). ER association with gene targets results from an association with FOXA1, responsible for recruitment of ER to the genome. Knockdown of FOXA1 expression blocks the association of ER with chromatin and estrogen-induced gene expression, demonstrating the necessity of FOXA1 in mediating an estrogen response in breast cancer cells.[7, 8] The role of FOXA1 in breast cancer is supported by the finding that expression of FOXA correlates with expression of the estrogen receptor in a panel of breast cancer cell lines and tissues and may interact with BRCA1.[9]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards 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, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:250-1:500 is recommended using extracts of the MCF7 cell line.

Indirect immunofluorescence: a working dilution of 1:100-1:200 is recommended by staining MCF7 cells fixed with paraformaldehyde-Triton.

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

References

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