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ProductInformation

Monoclonal Anti-Casein Kinase 2α
Clone 1AD9
produced in mouse, purified immunoglobulin

Catalog C5367

Product Description

Monoclonal Anti-Casein Kinase 2α (mouse IgG1 isotype) is derived from the hybridoma 1AD9 produced by the fusion of mouse myeloma cells (X63.Ag8 cells) and splenocytes from BALB/c mice immunized with human denatured recombinant Casein Kinase 2α (CK2α).[1] The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Casein Kinase 2α recognizes human,[1] rat and mouse[2] Casein Kinase 2α, ~35 kDa. This antibody epitope resides within amino acids 319-324 of human CK2α, which is a conserved epitope in many species.[2] The product is useful in ELISA,[1,2] immunoprecipitation[2] and immunoblotting.[1,2]

Casein Kinase type 2 (CK2) is a tetrameric enzyme of 130-150 kDa with α2β2 structure.[4,5] The α subunit is catalytic and the β subunit is thought to have regulatory properties. CK2 is expressed in the nucleus as well as in the cytoplasm and mitochondria. It has been implicated in a variety of cellular processes and is important for signaling pathways controlling growth division including mitosis, cellular transformation, and cell differentiation.[5,6] Around 1000 different protein substrates were found to be targets for CK2, among them nuclear proteins, enzymes, and transcription factors. It was shown that some mitogens induce the activity of CK2.[7,8] Analysis of 308 sites phosphorylated by CK2 has shown the paramount relevance of negatively charged side chains that are predominant over any other residues at positions n+3, n+2 and n+1.[9] In cancer cells, CK2 expression is elevated versus normal cells. Modest deregulation of CK2 expression imparts a potent oncogenic potential to cells. Cells treated with antisense to CK2 are induced to undergo apoptosis.[10]

Reagent

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

Antibody concentration: ~2 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety 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

Store at –20 °C 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-4 µg/ml is determined using total cell extract of MCF7 cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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