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Product Information

Anti-c-Fos
produced in rabbit, IgG fraction of antiserum

Catalog Number **F7799**

Product Description

Anti-c-Fos is produced in rabbit using a synthetic peptide (FSGFNADYEASSSR-K) corresponding to the N-terminal region of human c-Fos (amino acids 3-16 with a C-terminal added lysine) conjugated to KLH as immunogen. This sequence is identical in rat, mouse and pig c-Fos and is highly conserved (single amino acid substitution) in the viral Fos protein (v-Fos) originating from the FBJ murine osteosarcoma virus. 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-c-Fos recognizes c-Fos by immunoblotting, (as single or multiple bands at 50-62 kDa) and by immunohistochemistry. By immunoblotting, the antibody may also detect bands of ~40 kDa representing c-Fos degradation products. Staining of c-Fos by immunoblotting is specifically inhibited with c-Fos immunizing peptide (c-Fos human, amino acids 3-16 with C-terminally added lysine).

c-Fos, an ~55 kDa nuclear phosphoprotein, belongs to a family of transcription factors, including FosB, Fra1, Fra2. The *fos* oncogene was isolated as a retroviral transforming gene (*v-fos*) carried by the FBJ-murine osteosarcoma virus. c-Fos undergoes post-translational modifications and other forms have been described including 57 kDa, 60 kDa and 62 kDa proteins. c-Fos plays an important role in cell proliferation and differentiation.[1,2] In addition, it is involved in cellular responses to stress, cell damage and death, and has a central role in normal bone and hematopoietic cell development and in oncogenesis.[2-5] c-Fos is rapidly and transiently induced in almost every cell type upon stimulation by a variety of extracellular stimuli, including stress, mitogenic growth factors, cytokines, neurotransmitters and pharmacological agents.[3,6-8]

Stable expression of c-Fos has been shown in developing bone tissue and teeth, hematopoietic cells, germ cells, and in the central nervous system. High levels of c-Fos are expressed in human full term fetal membranes.[9] Increased expression of c-Fos is found in some human carcinomas, including colon and pancreatic adenocarcinoma. c-Fos associates with the c-Jun protein, forming a stable c-Fos/c-Jun heterodimeric complex, known as the transcription factor AP-1. This complex binds to the DNA promoter region, referred to as the AP-1 binding site. c-Fos has two amino terminal domains required for transactivation, a bZIP region consisting of a basic domain required for DNA binding and a leucine zipper domain through which c-Fos associates with c-Jun.[10,11]

Reagent

Supplied as IgG fraction 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a minimum working antibody dilution of 1:1,000 is recommended using a nuclear extract of A-431 cell line or a nuclear extract of A-431phorbol ester (TPA)-induced, human epidermal carcinoma A431 cell line.

Immunohistochemistry: a minimum working antibody dilution of 1:5,000 is recommended by immunohistochemistry (nuclear staining) of formalin-fixed, paraffin embedded sections of human colon carcinoma tissue.

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

References

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