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ProductInformation

ANTI-cFOS
Developed in Rabbit
Purified Rabbit Immunoglobulin

Product Number **F137**

Product Description

Anti-cFos was developed by immunizing rabbits with a synthetic peptide (Ser-Gly-Phe-Asn-Ala-Asp-Tyr-Glu-Ala-Ser-Ser-Ser-Arg-Cys) representing amino acids 4-17 of the N-terminus of the human and murine cFos.

This antibody detects cFos expressed in murine NIH 3T3 cells by immunoblotting. It does not detect cFos expressed in HeLa cell.

Cellular oncogenes, or protooncogenes, play pivotal roles in cellular communication pathways that regulate normal growth, development and differentiation. The cellular oncogene families fos and jun encode nuclear proteins that can function as transcription factors. The fos family of nuclear oncogenes encode cFos, FosB, Fra1 (fos-related antigen), and Fra2.

Fos and Jun dimerize to form Activator Protein-1 (AP-1), a transcriptional factor that binds to the TPA (12-O-tetradecanoylphorbol 13-acetate) response element (TRE) of several cellular and viral genes including human collagenase, metallothionein IIa, stromelysin, interleukin 2, SV40, and polyoma. Fos and Jun contain the 'leucine-zipper' motif that allows for dimerization and an adjacent basic domain required for biological activity. The functionally active form of Fos is in a heterodimer with a member of the Jun family. While Jun family members can form functional homodimers, studies indicate that Fos family members do not self-associate and therefore do not bind DNA on their own. The various dimers differ in their ability to transactivate AP-1 dependent genes.

Several extracellular signals induce cFos expression including TPA and other activators of Protein Kinase C such as serum, EGF, PDGF, TNFα, TGFβ, and Interleukin-1. Members of the steroid receptor superfamily also regulate cFos and cJun expression.

Reagents

Anti-cFos is supplied lyophilized from phosphate buffered saline (PBS) and contains 0.05% sodium azide as a preservative.

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 hazards and safe handling practices.

Preparation Instructions

Anti-cFos should be reconstituted prior to use with 100 µl of distilled water. Care should be taken in reconstitution to ensure that all parts of the lyophilized pellet are dissolved.

Storage/Stability

Prior to reconstitution, store at –20 °C. After reconstitution and for continuous use, store at 2 to 8 °C for up to one month. For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers is not recommended. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

Recommended starting titer for Anti-cFos is 10 µg/ml for immunoblotting. However, optimal working concentration should be determined by serial dilutions.

References

1. Bellavance, L.L. et al. "Altered c-fos expression in the parabrachial nucleus in a rodent model of CFA-induced peripheral inflammation." *J. Comp. Neurol.* **366**, 431-437 (1996).
2. Berghorn, K.A. et al. "cFos immunoreactivity is enhanced with biotin amplification." *J. Histochem. Cytochem.* **42**, 1635-1642 (1994).

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