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#2023**FosB (5G4) Rabbit mAb (Alexa Fluor® 488 Conjugate)****Cell Signaling**
TECHNOLOGY®**Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: FC-FP	Reactivity: H M R	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P53539	Entrez-Gene Id: 2354
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
Specificity / Sensitivity	FosB (5G4) Rabbit mAb (Alexa Fluor® 488 Conjugate) detects endogenous levels of total FosB protein (both FosB and FosB2 isoforms). The antibody does not cross-react with other Fos proteins, including c-fos, FRA1 and FRA2.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human FosB. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-6.	
Product Description	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometric analysis of human cells. The unconjugated antibody FosB (5G4) Rabbit mAb #2251 reacts with human, mouse and rat FosB protein. CST expects that FosB (5G4) Rabbit mAb (Alexa Fluor® 488 Conjugate) will also recognize FosB in these species.	
Background	<p>The Fos family of nuclear oncogenes includes c-Fos, FosB, Fos-related antigen 1 (FRA1), and Fos-related antigen 2 (FRA2) (1). While most Fos proteins exist as a single isoform, the FosB protein exists as two isoforms: full-length FosB and a shorter form, FosB2 (Delta FosB), which lacks the carboxy-terminal 101 amino acids (1-3). The expression of Fos proteins is rapidly and transiently induced by a variety of extracellular stimuli, including growth factors, cytokines, neurotransmitters, polypeptide hormones, and stress. Fos proteins dimerize with Jun proteins (c-Jun, JunB, and JunD) to form Activator Protein-1 (AP-1), a transcription factor that binds to TRE/AP-1 elements and activates transcription. Fos and Jun proteins contain the leucine-zipper motif that mediates dimerization and an adjacent basic domain that binds to DNA. The various Fos/Jun heterodimers differ in their ability to transactivate AP-1 dependent genes. In addition to increased expression, phosphorylation of Fos proteins by Erk kinases in response to extracellular stimuli may further increase transcriptional activity (4-6). Phosphorylation of c-Fos at Ser32 and Thr232 by Erk5 increases protein stability and nuclear localization (5). Phosphorylation of FRA1 at Ser252 and Ser265 by Erk1/2 increases protein stability and leads to overexpression of FRA1 in cancer cells (6). Following growth factor stimulation, expression of FosB and c-Fos in quiescent fibroblasts is immediate, but very short-lived, with protein levels dissipating after several hours (7). FRA1 and FRA2 expression persists longer, and appreciable levels can be detected in asynchronously growing cells (8). Deregulated expression of c-Fos, FosB, or FRA2 can result in neoplastic cellular transformation; however, Delta FosB lacks the ability to transform cells (2,3).</p>	
Background References	<ol style="list-style-type: none"> 1. Tulchinsky, E. (2000) <i>Histol Histopathol</i> 15, 921-8. 2. Dobrazanski, P. et al. (1991) <i>Mol Cell Biol</i> 11, 5470-8. 3. Nakabeppu, Y. and Nathans, D. (1991) <i>Cell</i> 64, 751-9. 4. Rosenberger, S.F. et al. (1999) <i>J Biol Chem</i> 274, 11224-30. 5. Sasaki, T. et al. (2006) <i>Mol Cell</i> 24, 63-75. 6. Basbous, J. et al. (2007) <i>Mol Cell Biol</i> 27, 3936-50. 7. Kovary, K. and Bravo, R. (1991) <i>Mol Cell Biol</i> 11, 2451-9. 8. Kovary, K. and Bravo, R. (1992) <i>Mol Cell Biol</i> 12, 5015-23. 	

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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