

# FosB (5G4) Rabbit mAb (Alexa Fluor® 488 Conjugate)

✓ 100 µl  
(50 tests)

New more concentrated formulation

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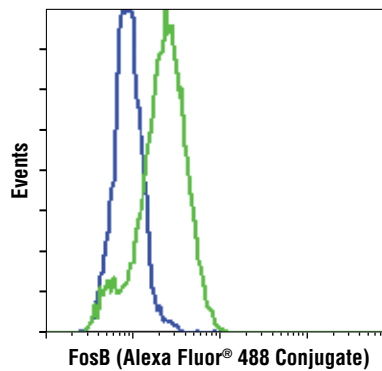
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Isotype
F Endogenous	H, M, R	Rabbit IgG

**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:** 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) that lacks the carboxy-terminal 101 amino acids (1,2). 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 on serine 32 and threonine 232 by ERK-5 increases protein stability and nuclear localization (5). Phosphorylation of FRA1 on serines 252 and 265 by ERK-1/2 increases protein stability and leads to over-expression of FRA1 in cancer cells (6). Expression of FosB and c-Fos in quiescent fibroblasts after growth factor stimulation is immediate, but very short-lived, with protein levels dissipating after several hours (7). However, 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, FosB2 lacks the ability to transform cells (2,3).

**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.



Flow cytometric analysis of HeLa cells, untreated (blue) or treated with TPA (green), using FosB (5G4) Rabbit mAb (Alexa Fluor® 488 Conjugate).

**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.

**Directions for Use:** Add 10 µl of the conjugated antibody to 500,000 cells in 90 µl PBS/0.5% BSA. See protocol for more details.

#### Background References:

- (1) Tulchinsky, E. (2000) *Histol. Histopathol.* 15, 921-928.
- (2) Dobrzanski, P. et al. (1991) *Mol. Cell. Biol.* 11, 5470-5478.
- (3) Nakabeppu, Y. and Nathans, D. (1991) *Cell* 64, 751-759.
- (4) Rosenberger, S.F. et al. (1999) *J. Biol. Chem.* 274, 1124-1130.
- (5) Sasaki, T. et al. (2006) *Mol. Cell* 24, 63-75.
- (6) Basbous, J. et al. (2007) *Mol. Cell. Biol.* 27, 3936-3950.
- (7) Kovary, K. and Bravo, R. (1991) *Mol. Cell. Biol.* 11, 2451-2459.
- (8) Kovary, K. and Bravo, R. (1992) *Mol. Cell. Biol.* 12, 5015-5023

**Entrez-Gene ID** #2354  
**Swiss-Prot Acc.** #P53539

**Storage:** Supplied in PBS (pH 7.2), less than 0.1% sodium azide, 2 mg/ml BSA. Store at 4°C. Protect from light. Do not freeze.

\*Species cross-reactivity other than human is predicted by Western analysis using the unconjugated antibody.

#### Recommended Antibody Dilutions:

Flow Cytometry 1:50

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

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