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#8490

## LEF1 (C12A5) 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

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<b>Applications:</b> FC-FP	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q9UJU2	<b>Entrez-Gene Id:</b> 51176
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<b>Product Usage Information</b>	<b>Application</b> Flow Cytometry (Fixed/Permeabilized)	<b>Dilution</b> 1:50
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	LEF1 (C12A5) Rabbit mAb (Alexa Fluor® 488 Conjugate) detects endogenous levels of total LEF1 protein. It does not recognize the dominant negative forms of LEF1 generated by an alternative promoter.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro82 of human LEF1 protein.	
<b>Product Description</b>	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometric analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated LEF1 (C12A5) Rabbit mAb #2230.	

### Background

LEF1 and TCF are members of the high mobility group (HMG) DNA-binding protein family of transcription factors that consists of the following: Lymphoid Enhancer Factor 1 (LEF1), T Cell Factor 1 (TCF1/TCF7), TCF3/TCF7L1, and TCF4/TCF7L2 (1). LEF1 and TCF1/TCF7 were originally identified as important factors that regulate early lymphoid development (2) and act downstream in Wnt signaling. LEF1 and TCF bind to Wnt response elements to provide docking sites for  $\beta$ -catenin, which translocates to the nucleus to promote the transcription of target genes upon activation of Wnt signaling (3). LEF1 and TCF are dynamically expressed during development and aberrant activation of the Wnt signaling pathway is involved in many types of cancers, including colon cancer (4,5).

LEF1 has several alternatively spliced isoforms. LEF1 also has an alternative promoter that is preferentially active in lymphocytes. The isoforms generated by this alternative promoter have no amino-terminal  $\beta$ -catenin binding domain and may function in a dominant negative manner (6-8).

### Background References

1. Waterman, M.L. (2004) *Cancer Metastasis Rev* 23, 41-52.
2. Schilham, M.W. and Clevers, H. (1998) *Semin Immunol* 10, 127-32.
3. Brantjes, H. et al. (2002) *Biol Chem* 383, 255-61.
4. Reya, T. and Clevers, H. (2005) *Nature* 434, 843-50.
5. Logan, C.Y. and Nusse, R. (2004) *Annu Rev Cell Dev Biol* 20, 781-810.
6. Hovanes, K. et al. (2000) *Nucleic Acids Res* 28, 1994-2003.
7. Hovanes, K. et al. (2001) *Nat Genet* 28, 53-57.
8. Kobiela, A. et al. (2001) *Acta Biochim Pol* 48, 221-226.

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Applications Key</b>	<b>FC-FP:</b> Flow Cytometry (Fixed/Permeabilized)
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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