

**TCF4/TCF7L2 (C48H11) Rabbit mAb  
(Biotinylated)**

**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: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W             | H           | Endogenous   | 58, 79    | Rabbit IgG      | #Q9NQB0     | 6934            |

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

**Specificity/Sensitivity**

TCF4/TCF7L2 (C48H11) Rabbit mAb (Biotinylated) detects endogenous levels of total TCF4/TCF7L2 protein.

**Species predicted to react based on 100% sequence homology**

Mouse, Chicken

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu331 of human TCF4/TCF7L2 protein.

**Description**

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated TCF4/TCF7L2 (C48H11) Rabbit mAb #2569.

**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).

TCF4/TCF7L2 is expressed widely during development. Gene targeting studies indicate that TCF4/TCF7L2 is required to maintain the crypt stem cells of the small intestine (6,7). TCF4/TCF7L2 has several splicing isoforms that are expressed differentially in tissues and during cancer progression (8,9). Studies also indicate that a variant of the TCF4/TCF7L2 gene confers an increased risk of type 2 diabetes (10).

**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. Cho, E.A. and Dressler, G.R. (1998) *Mech Dev* 77, 9-18.
7. Korinek, V. et al. (1998) *Nat Genet* 19, 379-83.
8. Howng, S.L. et al. (2004) *Int J Oncol* 25, 1685-92.
9. Shiina, H. et al. (2003) *Clin Cancer Res* 9, 2121-32.
10. Grant, S.F. et al. (2006) *Nat Genet* 38, 320-3.

**Species Reactivity**

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

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human

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