

**#2569** Store at **-20°C**

# TCF4 (C48H11) Rabbit mAb

100  $\mu$ l  
 (10 western blots)



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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.

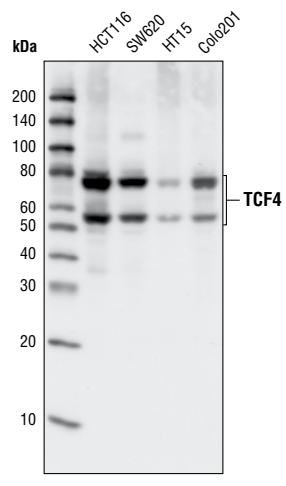
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, ChIP Endogenous	H, (M, C)	58, 79 kDa	Rabbit IgG**

**Background:** LEF1 and TCF are members of the high mobility group (HMG) DNA binding protein family of transcription factors which consists of the following: Lymphoid enhancer factor 1 (LEF1), T Cell Factor 1 (TCF1), TCF3 and TCF4 (1). LEF1 and TCF1 were originally identified as important factors regulating early lymphoid development (2) and act downstream in Wnt signaling. LEF1/TCF bind to Wnt response elements to provide a docking site for  $\beta$ -catenin, which translocates to the nucleus to promote the transcription of target genes upon activation of Wnt signaling (3). LEF1/TCF proteins 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).

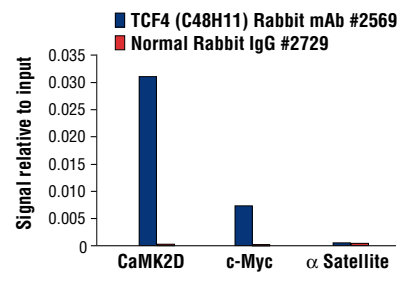
TCF4, also known as TCF7L2, is expressed widely during development. Gene targeting studies indicate that TCF4 is required to maintain the crypt stem cells of the small intestine (6,7). TCF4 has several splicing isoforms that are expressed differentially in tissues and during cancer progression (8,9).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

**Specificity/Sensitivity:** TCF4 (C48H11) Rabbit mAb detects endogenous levels of total TCF4 protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu330 of human TCF4.



Western blot analysis of extracts from various cell types using TCF4 (C48H11) Rabbit mAb.



Chromatin immunoprecipitations were performed with cross-linked chromatin from  $4 \times 10^6$  HCT 116 cells and either 10  $\mu$ l of TCF4 (C48H11) Rabbit mAb or 2  $\mu$ l of Normal Rabbit IgG #2729 using SimpleChIP™ Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by Real-Time PCR using SimpleChIP™ Human CaMK2D Intron 3 Primers #5111, human c-Myc promoter primers, and SimpleChIP™ Human  $\alpha$  Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

**Entrez-Gene ID** #6934  
**Swiss-Prot Acc.** #Q9NQB0

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^\circ\text{C}$ . Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:50
Chromatin IP	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.

**Background References:**

- (1) Waterman, M.L. (2004) *Cancer Metastasis Rev.* 23, 41–52.
- (2) Schilham, M.W. and Clevers, H. (1998) *Semin. Immunol.* 10, 127–132.
- (3) Brantjes, H. et al. (2002) *Biol. Chem.* 383, 255–261.
- (4) Reya, T. and Clevers, H. (2005) *Nature* 434, 843–850.
- (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, 379–383.
- (8) Howng, S.L. et al. (2004) *Int. J. Oncol.* 25, 1685–1692.
- (9) Shiina, H. et al. (2003) *Clin. Cancer Res.* 9, 2121–2132.
- (10) Grant, S.F. et al. (2006) *Nat. Genet.* 38, 320–323.

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

Rabbit monoclonal antibody is produced under license (granting certain rights including those under U. S. Patent No. 5,675,063) from Epitomics, Inc.

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected** Species enclosed in parentheses are predicted to react based on 100% homology.