Revision 7

Store at -20C

#2569

TCF4/TCF7L2 (C48H11) Rabbit mAb

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, W-S, IP, ChIP, ChIP-seq, C&R, C&T	H	Endogenous	58, 79	Rabbit IgG	#Q9NQB0	6934

Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:50
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50
CUT&Tag	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

TCF4/TCF7L2 (C48H11) Rabbit mAb 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.

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 β-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

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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, 379-383.
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.

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 **W-S:** Simple Western™ **IP:** Immunoprecipitation **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN **C&T:** CUT&Tag

Cross-Reactivity Key

H: Human

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Limited Uses