

TCF4/TCF7L2 (C48H11) Rabbit mAb

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: W, W-S, IP, ChIP, ChIP-seq, C&R, C&T	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 58, 79	Source/Isotype: Rabbit IgG	UniProt ID: #Q9NQ80	Entrez-Gene Id: 6934
---	-------------------------	-----------------------------------	----------------------------	--------------------------------------	-------------------------------	--------------------------------

Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ 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

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, 379-383.
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
Trademarks and Patents	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. SimpleChIP is a registered trademark of Cell Signaling Technology, Inc. U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.
Limited Uses	Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect. Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.