Store at -20°C

#3736

TNF-R1 (C25C1) Rabbit mAb

Cell Signaling TECHNOLOGY®

✓ 100 µl
(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.

Entrez-Gene ID #7132
Swiss-Prot Acc. #P19438

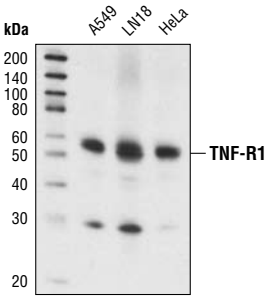
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H	55 kDa	Rabbit IgG**

Background: TNF-α is an important cytokine produced by numerous cell types including neutrophils, activated lymphocytes, macrophages and NK cells. It plays a critical role in inflammatory responses and in apoptosis (1). TNF-α exists as a membrane-anchored and soluble form, both of which show biological activity. Response to TNF-α is mediated through two receptors, TNF-R1, which is widely expressed, and TNF-R2, which is expressed mainly in immune and endothelial cells (2). Antagonists to TNF-α have been validated as therapeutic targets for rheumatoid arthritis and other immune disorders (3).

The two receptors for TNF-α, TNF-R1 (55 kDa) and TNF-R2 (75 kDa) can mediate distinct cellular responses (4,5). In most cases cytotoxicity elicited by TNF-α has been reported to act through TNF-R1 (6,7). Cytotoxicity is mediated by a "death domain" with the intracellular region of the receptor that binds to the death domain adaptor protein TRADD and triggers the activation of caspases (8). Soluble forms of both receptors have also been characterized which can bind TNF-α and may play an important role in immune disorders (9,10).

Specificity/Sensitivity: TNF-R1 (C25C1) Rabbit mAb detects endogenous levels of human TNF-R1 protein. This antibody does not appear to cross-react with other related family members.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues within the intracellular region and surrounding Ser331 of human TNF-R1 protein.



Western blot analysis of extracts from A549, LN-18 and HeLa cells using TNF-R1 (C25C1) Rabbit mAb.

Background References:

(1) Aggarwal, B.B. (2003) *Nat Rev Immunol* 3, 745–56.
(2) Locksley, R.M. et al. (2001) *Cell* 104, 487–501.
(3) Taylor, P.C. et al. (2004) *Curr Opin Biotechnol* 15, 557–63.
(4) Tartaglia, L.A. et al. (1991) *Proc Natl Acad Sci USA* 88, 9292–6.
(5) Peschon, J.J. et al. (1998) *J Immunol* 160, 943–52.
(6) Tartaglia, L.A. et al. (1993) *Cell* 73, 213–6.
(7) Rothe, J. et al. (1993) *Nature* 364, 798–802.
(8) Chen, G. and Goeddel, D.V. (2002) *Science* 296, 1634-5.
(9) Humbert, M. et al. (1994) *Am J Respir Crit Care Med* 149, 1681-5.
(10) Schröder, J. et al. *Infection* 23, 143-8.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°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	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

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.

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