

#6945 Store at -20C

## TNF- $\alpha$ (D5G9) 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

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	18, 25	Rabbit IgG	#P01375	7124

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### 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°C. Do not aliquot the antibody.

### Specificity / Sensitivity

TNF- $\alpha$  (D5G9) Rabbit mAb recognizes endogenous levels of total full length and secreted TNF- $\alpha$  protein. It can detect up to 10 pg of recombinant TNF- $\alpha$  by western blot.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant human TNF- $\alpha$  protein.

### Background

TNF- $\alpha$ , the prototypical member of the TNF protein superfamily, is a homotrimeric type-II membrane protein (1,2). Membrane-bound TNF- $\alpha$  is cleaved by the metalloprotease TACE/ADAM17 to generate a soluble homotrimer (2). Both membrane and soluble forms of TNF- $\alpha$  are biologically active. TNF- $\alpha$  is produced by a variety of immune cells including T cells, B cells, NK cells, and macrophages (1). Cellular response to TNF- $\alpha$  is mediated through interaction with receptors TNF-R1 and TNF-R2 and results in activation of pathways that favor both cell survival and apoptosis depending on the cell type and biological context. Activation of kinase pathways (including JNK, Erk1/2, p38 MAPK, and NF- $\kappa$ B) promotes the survival of cells, while TNF- $\alpha$ -mediated activation of caspase-8 leads to programmed cell death (1,2). TNF- $\alpha$  plays a key regulatory role in inflammation and host defense against bacterial infection, notably *Mycobacterium tuberculosis* (3).

### Background References

- Aggarwal, B.B. (2003) *Nat Rev Immunol* 3, 745-56.
- Hehlhans, T. and Pfeffer, K. (2005) *Immunology* 115, 1-20.
- Lin, P.L. et al. (2007) *J Invest Dermatol Symp Proc* 12, 22-5.

### 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

**WB:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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