

# MyD88 (N-19): sc-8196

## BACKGROUND

Interleukin-1 (IL-1) induced activation of the NF $\kappa$ B pathway is mediated through the IL-1 receptor and the subsequent phosphorylation of IL-1 receptor associated kinase (IRAK). The myeloid differentiation protein MyD88 was originally characterized as a protein upregulated in myeloleukemic cells following IL-6 induced growth arrest and terminal differentiation. MyD88 is now known to function as an adaptor protein for the association of IRAK with the IL-1 receptor. MyD88 is functionally homologous to the adaptor protein Tube in the Toll signalling pathway of *Drosophila*, and both proteins are members of the Toll/IL-1R superfamily. MyD88 contains a characteristic N-terminal death domain that is essential for NF $\kappa$ B activation and an adjacent Toll/IL-1R homology domain (TIR domain). Collectively, these domains enable the protein-protein interactions of MyD88 with IRAK and the IL-1 receptor complex.

## CHROMOSOMAL LOCATION

Genetic locus: MYD88 (human) mapping to 3p22.2; Myd88 (mouse) mapping to 9 F3.

## SOURCE

MyD88 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MyD88 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8196 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-8196 AC, 500  $\mu$ g/0.25 ml agarose in 1 ml.

## APPLICATIONS

MyD88 (N-19) is recommended for detection of MyD88 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MyD88 (N-19) is also recommended for detection of MyD88 in additional species, including bovine.

Suitable for use as control antibody for MyD88 siRNA (h): sc-35986, MyD88 siRNA (m): sc-35987, MyD88 shRNA Plasmid (h): sc-35986-SH, MyD88 shRNA Plasmid (m): sc-35987-SH, MyD88 shRNA (h) Lentiviral Particles: sc-35986-V and MyD88 shRNA (m) Lentiviral Particles: sc-35987-V.

Molecular Weight of MyD88: 33 kDa.

Positive Controls: J774.A1 cell lysate: sc-3802, LNCaP cell lysate: sc-2231 or mouse uterus extract: sc-364254.

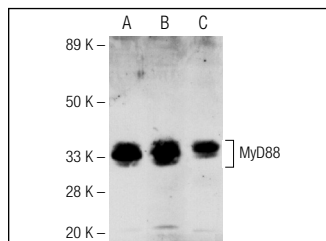
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



MyD88 (N-19): sc-8196. Western blot analysis of MyD88 expression in J774.A1 (A) and MCP-5 (B) whole cell lysates and mouse uterus extract (C).

## SELECT PRODUCT CITATIONS

- Chen, B.C., et al. 2002. Inhibition of interleukin-1  $\beta$ -induced NF $\kappa$ B activation by calcium/calmodulin-dependent protein kinase kinase occurs through Akt activation associated with interleukin-1 receptor-associated kinase phosphorylation and uncoupling of MyD88. *J. Biol. Chem.* 277: 24169-24179.
- Medvedev, A.E., et al. 2002. Dysregulation of LPS-induced Toll-like receptor 4-MyD88 complex formation and IL-1 receptor-associated kinase 1 activation in endotoxin-tolerant cells. *J. Immunol.* 169: 5209-5216.
- Ciril, C., et al. 2008. Subversion of Toll-like receptor signaling by a unique family of bacterial Toll/interleukin-1 receptor domain-containing proteins. *Nat. Med.* 14: 399-406.
- Hipp, M.M., et al. 2008. Sorafenib, but not sunitinib, affects function of dendritic cells and induction of primary immune responses. *Blood* 111: 5610-5620.
- Lee, S.J., et al. 2008. CT20126, a novel immunosuppressant, prevents collagen-induced arthritis through the downregulation of inflammatory gene expression by inhibiting NF $\kappa$ B activation. *Biochem. Pharmacol.* 76: 79-90.
- Zhu, C.Y., et al. 2009. Cell growth suppression by thanatos-associated protein 11 (THAP11) is mediated by transcriptional downregulation of c-Myc. *Cell Death Differ.* 16: 395-405.
- He, B., et al. 2010. The transmembrane activator TAC1 triggers immunoglobulin class switching by activating B cells through the adaptor MyD88. *Nat. Immunol.* 11: 836-845.
- Cui, J.G., et al. 2010. Differential regulation of interleukin-1 receptor-associated kinase-1 (IRAK-1) and IRAK-2 by microRNA-146a and NF $\kappa$ B in stressed human astroglial cells and in Alzheimer disease. *J. Biol. Chem.* 285: 38951-38960.
- Lee, H.M., et al. 2011. Autophagy negatively regulates keratinocyte inflammatory responses via scaffolding protein p62/SQSTM1. *J. Immunol.* 186: 1248-1258.