

# MyD88 (E-11): sc-74532



The Power to Question

## 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 signaling 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 (E-11) is a mouse monoclonal antibody raised against amino acids 1-296 of MyD88 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MyD88 (E-11) is available conjugated to agarose (sc-74532 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74532 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74532 PE), fluorescein (sc-74532 FITC), Alexa Fluor<sup>®</sup> 488 (sc-74532 AF488), Alexa Fluor<sup>®</sup> 546 (sc-74532 AF546), Alexa Fluor<sup>®</sup> 594 (sc-74532 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-74532 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-74532 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-74532 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

MyD88 (E-11) is recommended for detection of MyD88 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

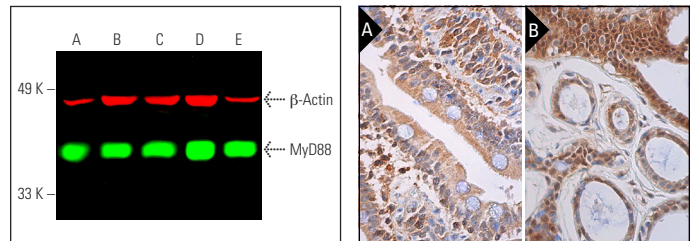
Suitable for use as control antibody for MyD88 siRNA (h): sc-35986, MyD88 siRNA (m): sc-35987, MyD88 siRNA (r): sc-106986, MyD88 shRNA Plasmid (h): sc-35986-SH, MyD88 shRNA Plasmid (m): sc-35987-SH, MyD88 shRNA Plasmid (r): sc-106986-SH, MyD88 shRNA (h): Lentiviral Particles: sc-35986-V, MyD88 shRNA (m): Lentiviral Particles: sc-35987-V and MyD88 shRNA (r) Lentiviral Particles: sc-106986-V.

Molecular Weight of MyD88: 33 kDa.

## STORAGE

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

## DATA



Simultaneous direct near-infrared western blot analysis of MyD88 expression, detected with MyD88 (E-11) Alexa Fluor<sup>®</sup> 680: sc-74532 AF680 and  $\beta$ -Actin expression, detected with  $\beta$ -Actin (C4) Alexa Fluor<sup>®</sup> 790: sc-47778 AF790 in LNCaP (A), HEL 92.1.7 (B), Raji (C), Jurkat (D) and SK-BR-3 (E) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214.

MyD88 (E-11): sc-74532. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Cheung, H.H., et al. 2010. Smac mimetic compounds potentiate interleukin-1 $\beta$ -mediated cell death. *J. Biol. Chem.* 285: 40612-40623.
- Kim, J.E., et al. 2014. Paclitaxel-exposed ovarian cancer cells induce cancer-specific CD4<sup>+</sup> T cells after doxorubicin exposure through regulation of MyD88 expression. *Int. J. Oncol.* 44: 1716-1726.
- Sun, J., et al. 2016. Comprehensive RNAi-based screening of human and mouse TLR pathways identifies species-specific preferences in signaling protein use. *Sci. Signal.* 9: ra3.
- Wang, S., et al. 2017. Dietary teasaponin ameliorates alteration of gut microbiota and cognitive decline in diet-induced obese mice. *Sci. Rep.* 7: 12203.
- Xie, X.L., et al. 2018. METH-induced neurotoxicity is alleviated by lactulose pretreatment through suppressing oxidative stress and neuroinflammation in rat striatum. *Front. Neurosci.* 12: 802.
- Li, W., et al. 2019. MicroRNA-451 relieves inflammation in cerebral ischemia-reperfusion via the Toll-like receptor 4/MyD88/NF $\kappa$ B signaling pathway. *Mol. Med. Rep.* 20: 3043-3054.
- Osuka, K., et al. 2020. Expression of high mobility group B1 and Toll-like receptor-nuclear factor  $\kappa$ B signaling pathway in chronic subdural hematomas. *PLoS ONE* 15: e0233643.
- Arellanes-Robledo, J., et al. 2021. Flightless-I is a potential biomarker for the early detection of alcoholic liver disease. *Biochem. Pharmacol.* 183: 114323.

## RESEARCH USE

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