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MyD88 Antibody [2E9C2]

Catalog # ASC11989

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q99836
Other Accession	AAC50954, 1814020
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Clone Names	2E9C2
Calculated MW	33233
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MyD88 antibody can be used for detection of MyD88 by Western blot at 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	4615
Other Names	Myeloid differentiation primary response protein MyD88, MYD88
Target/Specificity	MYD88;
Reconstitution & Storage	MyD88 monoclonal antibody can be stored at -20℃, stable for one year.
Precautions	MyD88 Antibody [2E9C2] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MYD88 (HGNC:7562)
Function	Adapter protein involved in the Toll-like receptor and IL-1 receptor signaling pathway in the innate immune response (PubMed:15361868, PubMed:18292575, PubMed:33718825, PubMed:37971847). Acts via IRAK1, IRAK2, IRF7 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (PubMed:15361868, PubMed:19506249, PubMed:24316379). Increases IL-8 transcription (PubMed:9013863). Involved in IL-18-mediated signaling pathway. Activates IRF1 resulting in its rapid migration into the nucleus to mediate an efficient induction of IFN-beta, NOS2/INOS, and IL12A genes. Upon TLR8 activation by GU-rich single-stranded RNA (GU- rich RNA) derived from viruses such as SARS-CoV-2, SARS-CoV and HIV-1, induces IL1B release through NLRP3 inflammasome activation (PubMed:33718825). MyD88-mediated signaling in intestinal

	epithelial cells is crucial for maintenance of gut homeostasis and controls the expression of the antimicrobial lectin REG3G in the small intestine (By similarity).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Ubiquitous..

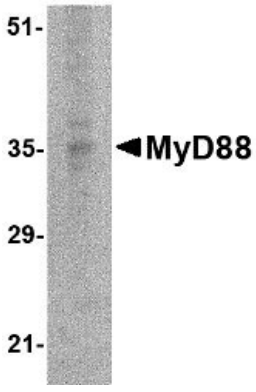
Background

MyD88 Monoclonal Antibody: The pro-inflammatory cytokine IL-1 induced cellular response requires IL-1 receptor complex including IL-1RI and IL-1RAcP. MyD88 has been identified as an adapter molecule in the IL-1 signaling pathway. MyD88 associates with and recruits IRAK to the IL-1 receptor complex in response to IL-1 treatment and dominant negative form of MyD88 attenuates IL-1R-mediated NF-κB activation. MyD88 is also employed as a regulator molecule by IL-18 receptor and human Toll receptor, which are members in the Toll/IL-1R family of receptors. Targeted disruption of the MyD88 gene results in lose of cellular responses to IL-1 and IL-18, and MyD88-deficient mice lack responses to bacterial product LPS that employs Toll-like receptors 2 and 4 (TLR2 and TLR4) as the signaling receptors. MyD88 is a general adapter protein for the Toll/IL-1R family of receptors and plays an important role in the inflammatory response induced by cytokines IL-1 and IL-18 and endotoxin. MyD88 gene is expressed in many tissues.

References

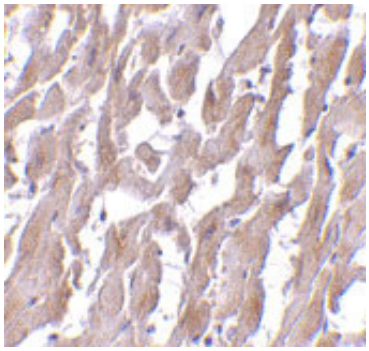
Muzio M, Ni J, Feng P, et al. IRAK (Pelle) family member IRAK-2 and MyD88 as proximal mediators of IL-1 signaling. Science 1997; 278:1612-5.
Adachi O, Kawai T, Takeda K, et al. Targeted disruption of the MyD88 gene results in loss of IL-1- and IL-18-mediated function. Immunity 1998; 9:143-50.
Medzhitov R, Preston-Hurlburt P, Kopp E, et al. MyD88 is an adaptor protein in the hToll/IL-1 receptor family signaling pathways. Mol. Cell 1998; 2:253-8.
Kawai T, Adachi O, Ogawa T, et al. Unresponsiveness of MyD88-deficient mice to endotoxin. Immunity 1999; 11:115-22.

Images



Western blot analysis of MyD88 in EL4 whole cell lysate with MyD88 antibody at 2 µg/mL.

Immunohistochemistry of MyD88 in human heart with MyD88 antibody at 2.5 µg/mL.



Citations

- Resveratrol alleviates lysophosphatidylcholine-induced damage and inflammation in vascular endothelial cells.