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Product Information

Anti-MyD88, Internal Domain
produced in rabbit, affinity isolated antibody

Catalog Number **M0185**

Product Description

Anti-MyD88, Internal Domain is produced in rabbit using a peptide corresponding to amino acids 233-248 of the internal domain of human MyD88 as immunogen.[1] This peptide differs from mouse MyD88 by 2 amino acids.

The antibody specifically recognizes MyD88 (35 kDa) by immunoblotting using human Jurkat (T leukemia) cell lysates. Species reactivity is observed with human and mouse.

The pro-inflammatory cytokine IL-1 induced cellular response requires IL-1 receptor complex including IL-1 RI and IL-1RAcP. Recently, MyD88 (myeloid differentiation factor 88) was identified as an adapter molecule in the IL-1 signaling pathway.[2] MyD88 associates with and recruits IRAK (IL-1 receptor-associated kinase) to the IL-1 receptor complex in response to IL-1 treatment and dominant negative form of MyD88 attenuates IL-1R-mediated NF-kB activation. MyD88 is also employed as a regulator molecule by IL-18 receptor and human Toll receptor,[3, 4] which are members in the Toll/IL-1R family of receptors. The innate immune system uses Toll family receptors to signal for the presence of microbes and initiate host defense. Bacterial lipoproteins (BLPs), which are expressed by all bacteria, are potent activators of Toll-like receptor-2 (TLR2). MyD88 mediates both apoptosis and NF-κB activation by BLP-stimulated TLR2. Inhibition of the NF-κB pathway downstream of MyD88 potentiates apoptosis, indicating that these two pathways bifurcate at the level of MyD88. TLR2 signals for apoptosis through MyD88 via a pathway involving Fas-associated death domain protein (FADD) and caspase 8. Moreover, MyD88 binds FADD and is sufficient to induce apoptosis.[5]

MyD88 possesses a unique modular structure that consists of an N-terminal "death domain," similar to the intracellular segments of TNF receptor 1 and Fas, and a C-terminal region related to the cytoplasmic domains of the Drosophila morphogen Toll and vertebrate interleukin-1 receptors. MyD88 gene is expressed in many tissues.

Reagent

Supplied at ~0.5 mg/ml in phosphate buffered saline, containing 0.02% sodium azide

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Antibody can be stored at 2-8 °C for three months and at −20 °C for one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Product Profile

Immunoblotting: the recommended working concentration is 0.5-1 μg/ml using a human Jurkat cell lysate. A band of ~35 kDa is detected.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Bonnert, T.P., et al., The cloning and character-ization of human MyD88: a member of an IL-1 receptor related family. FEBS Lett., **402**, 81-84 (1997).
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3. Adachi, O., et al., Targeted disruption of the MyD88 gene results in loss of IL-1- and IL-18-mediated function. Immunity, **9**, 143-150 (1998).
4. Medzhitov, R., et al., MyD88 is an adaptor protein in the hToll/IL-1 receptor family signaling pathways. Mol. Cell., **2**, 253-258 (1998).
5. Aliprantis, A.O., et al., The apoptotic signaling pathway activated by toll-like receptor-2. EMBO J., **19**, 3325-3336 (2000)

RC,PHC 09/12-1