

# PRODUCT INFORMATION



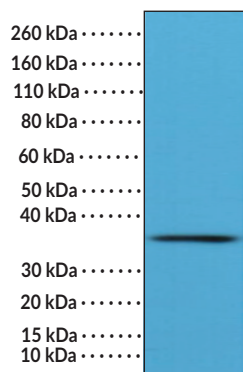
## MyD88 (N-Term) Rabbit Monoclonal Antibody (Clone RM306)

Item No. 32250

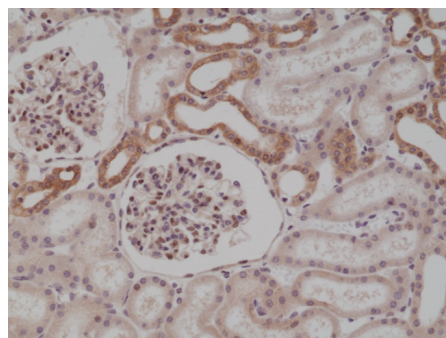
### Overview and Properties

<b>Contents:</b>	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	Myeloid Differentiation Primary Response 88
<b>Immunogen:</b>	Peptide from the N-terminal region of human MyD88
<b>Cross Reactivity:</b>	(+) MyD88
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Clone:</b>	RM306
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:250 for IHC and 1:100-1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



WB of K562 cell lysate using MyD88 (N-Term) Rabbit Monoclonal Antibody (Clone RM306) at a 1:100 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human kidney tissue using MyD88 (N-Term) Rabbit Monoclonal Antibody (Clone RM306) at a 1:250 dilution.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
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## Description

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MyD88 is an adaptor protein involved in the innate immune response.<sup>1,2</sup> It is composed of an N-terminal death domain, intermediate domain, and C-terminal toll-interleukin-1 receptor (TIR) domain.<sup>1</sup> It is expressed in both myeloid and non-myeloid tissues, and its expression can be induced by immune-related factors, such as IL-6, LPS, and IFNs.<sup>2</sup> As an adaptor protein, the TIR domain of MyD88 interacts with the TIR domain of toll-like receptor 1 (TLR1), -2, -4, -5, and -6, and IL-1 receptor (IL-1R) at the plasma membrane and TLR7, -8, and -9 at the endosomal membrane, while the MyD88 death domain interacts with IL-1R-associated kinases (IRAKs).<sup>1,5</sup> In this way, MyD88 translates signals from TLRs and IL-1Rs to IRAKs, inducing signaling that leads to activation of NF- $\kappa$ B and subsequent cytokine production, as well as MAPK signaling.<sup>1,2</sup> MyD88 is associated with inflammatory carcinogenesis but is also associated with protection from oncogenic pathogens.<sup>3</sup> Mice deficient for *Myd88* are protected from endotoxic shock induced by the TLR4 agonist LPS but have an increased susceptibility to bacterial pathogens and parasites.<sup>1</sup> A leucine-to-proline mutation at position 265 of *MYD88*, within the TIR domain, is associated with certain cancers, including Waldenström's macroglobulinemia and activated B cell diffuse large B cell lymphomas.<sup>4</sup> Cayman's MyD88 (N-Term) Rabbit Monoclonal Antibody (Clone RM306) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

## References

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1. Deguine, J. and Barton, G.M. MyD88: A central player in innate immune signaling. *F1000Prime Rep.* **6**, 97 (2014).
2. Janssens, S., and Beyaert, R. A universal role for MyD88 in TLR/IL-1R-mediated signaling. *Trends Biochem. Sci.* **27(9)**, 474-482 (2002).
3. Salcedo, R., Cataisson, C., Hasan, U., et al. MyD88 and its divergent toll in carcinogenesis. *Trends Immunol.* **34(8)**, 379-389 (2013).
4. Yu, X., Li, W., Deng, Q., et al. MYD88 L265P mutation in lymphoid malignancies. *Cancer Res.* **78(10)**, 2457-2462 (2018).
5. Zheng, C., Chen, J., Chu, F., et al. Inflammatory tole of TLR-MyD88 signaling in multiple sclerosis. *Front. Mol. Neurosci.* **12**, 314 (2020).