

Product datasheet MON2068

MONOSAN[®]

Mouse anti-TLR9, clone 5G5 (Monoclonal)

Clone no. 5G5

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Product name	Mouse anti-TLR9, clone 5G5 (Monoclonal)
Host	Mouse
Applications	IHC-fr,FC,ELISA,IHC-P,WB
Species reactivity	mouse, canine, human
Conjugate	-
Immunogen	Unknown or proprietary to MONOSAN and/or its suppliers
Isotype	IgG2a
Clonality	Monoclonal
Clone number	5G5
Size	1 ml
Concentration	100 ug/ ml
Format	-
Storage buffer	PBS with 0.1% BSA and 0.02% sodium azide
Storage until expiry date	2-8°C

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES

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Additional info

The monoclonal antibody 5G5 reacts with the Toll-like receptor 9 (TLR9, CD289). TLRs are highly conserved throughout evolution and have been implicated in the innate defence to many pathogens. In *Drosophila*, toll is required for the anti-fungal response, while the related 18-wheeler is involved in antibacterial defences. In mammals, TLRs identified as type I transmembrane signalling receptors with pattern recognition capabilities, have been implicated in the innate host defence to pathogens. As investigated so far all functional characterized TLR signal via the TLR/IL-1 receptor (IL-1R) pathway where recruitment of MyD88 seems to be essential. In contrast to cell-wall components, bacterial DNA is probably invisible for immune cells until DNA is liberated during processes taking place in the endosomal/lysosomal compartment where intracellular TLR9 recruits MyD88 to initiate signal transduction. Unmethylated CpG-dinucleotide-containing sequences are found much more frequently in bacterial genomes than in vertebrates genomes, whereas the frequency of CpG dinucleotides are suppressed and usually methylated. The regions adjacent to the CpG dinucleotides also affect the immunostimulatory activity. The optimal sequence differs significantly between mammalian species. Methylated CpG dinucleotides lack immunostimulatory activities. Cellular activation in response to bacterial DNA and synthetic dinucleotides containing unmethylated CpG-dinucleotides is mediated by TLR9. The monoclonal antibody 5G5 reacts with RAW macrophages and TLR9 transfected HEK293 cells, and it is cross reactive with canine TLR9.

References

1. Ahmad-Nejad; P et al. Eur J Immunol 2002; 32: 1958
2. Rutz, M et al Eur J Immunol 2004, 34: 2541
3. Rumio C et al. Am J Pathol 2004; 165:373
4. Pratesi G et al. Cancer res 2005; 65: 6388
5. Tokumasa N et al. Blood 2007; 110: 553

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