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Monoclonal Antibody to CD289 / TLR9 (268-284) - PE

Alternate names: Toll-like receptor 9, UNQ5798/PRO19605

Catalog No.: SM7105R

Quantity: 0.1 mg

Concentration: 0.5 mg/ml

Background: The Toll-like receptor (TLR) family in mammal comprises a family of transmembrane proteins characterized by multiple copies of leucine rich repeats in the extracellular domain and IL-1 receptor motif in the cytoplasmic domain. Like its counterparts in Drosophila, TLRs signal through adaptor molecules (1). The TLR family is a phylogenetically conserved mediator of innate immunity that is essential for microbial recognition (2). Ten human homologs of TLRs (TLR1-10) have been described (3). By using a BLAST search, Hemmi et al., 2000 (4) have identified and subsequently isolated a cDNA coding for TLR9. Gene knockout experiments suggest that TLR9 acts as a receptor for unmethylated CpG dinucleotides in the bacterial DNA (4). Human and mouse TLR9 share an overall amino-acid identity of 75.5%. TLR9 is highly expressed in spleen.

Uniprot ID: Q9NR96

NCBI: NP_059138.1

GeneID: 54106

Host / Isotype: Mouse / IgG1

Recommended Isotype Controls: SM10R (for use in human samples), SM20R (for use in rat samples)

Clone: 26C593.2

Immunogen: KLH-conjugated synthetic peptide corresponding to amino acids 268-284 of Human TLR9
AA Sequence:
CPRHFPQLHPDTFSHLS

Format:
State: Liquid purified Ig fraction
Purification: Protein G Chromatography
Buffer System: PBS containing 0.05% Sodium Azide as presrevative and 0.05% BSA as stabilizer
Label: PE

Applications:
Confocal Microscopy: See Greene et. al. (2005).
Flow Cytometry (Intracellular): 0.1-0.5 µg/1x10e6 cells.
Flow Cytometry (Cell surface): See Greene et. al. (2005).
Immunohistochemistry on Frozen Sections: 10-20 µg/ml (See Miller et al, 2005).
Immunohistochemistry on Paraffin Sections: See Miller et al, 2005.
Recommended Positive Control: Ramos, Human PBMCs.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody detects CD289 / TLR9.

Species Reactivity: **Tested:** Dog, Horse, Human, Mouse, Rat, Rhesus Monkey

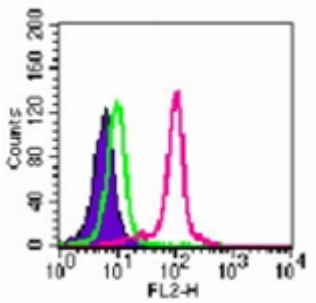
Storage: Store the antibody undiluted at 2-8°C.
DO NOT FREEZE!
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General Readings:

1. Muzio M, Natoli G, Saccani S, Levrero M, and Mantovani A. J. Exp. Med. 187: 2097-2101 (1998).
2. Medzhitov R and Janeway CA. Cell 91: 295-298 (1997).
3. Chuang TH and Ulevitch RJ. Biochim. Biophys. Acta 1518 (1-2):157-161 (2001)
4. Takeuchi O, Kawai T, Sanjo H, Copeland NG, Gilbert DJ, Jenkins NA, et al. TLR6: A novel member of an expanding toll-like receptor family. Gene. 1999 Apr 29;231(1-2):59-65. PubMed PMID: 10231569.
5. Hemmi H, Takeuchi O, Kawai T, Kaisho T, Sato S, Sanjo H, Matsumoto M, Hoshino K, Wagner H, Takeda K, and Shizo A. Nature 408: 740-745 (2000).

Pictures:

Intracellular flow analysis of TLR9 in Ramos cells using 0.1 µg of SM7105R. Shaded histogram represents Ramos cells without antibody; green represents a mouse IgG1-PE isotype control; red represents anti-TLR9 antibody.



Intracellular flow analysis of TLR9 in human PBMCs using 0.2 µg of SM7105R. Shaded histogram represents cells without antibody; green represents a mouse IgG1-PE isotype control; red represents anti-TLR9 antibody.