

Polyclonal Antibody to TLR3/CD283 (Phospho Tyr759)



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Polyclonal Antibody to TLR3/CD283 (Phospho Tyr759)

Catalog No : IMG-5348A
Formulation : 20 ug in 100 ul PBS containing 0.05% BSA and 0.05% sodium azide. Sodium azide is highly toxic.
Isotype : Rabbit Ig
Purification : Antigen Affinity Chromatography
Species React : Human
Predicted React : Bovine, Chimpanzee, Dog, Monkey, Mouse, Rat
Host : Rabbit

Application
Western blot analysis: 0.1-1.0 ug/ml
IF/ICC: see W. Xu. et. al (2008) for details
IHC (frozen): see W. Xu. et. al (2008) for details
Storage
Store at 4 °C, stable for 6 months. For long-term storage, aliquot and store at -20 °C.

Background

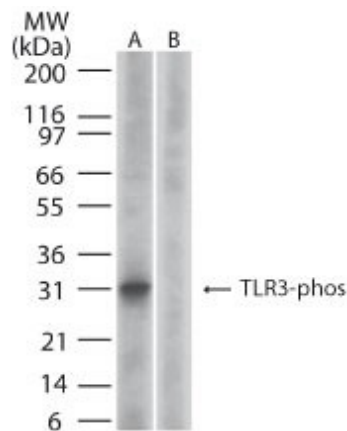
The Toll-like receptor (TLR) family in mammal comprises a family of transmembrane proteins characterized by multiple copies of leucine rich repeats in the extracellular domain and IL-1 receptor motif in the cytoplasmic domain. Like its counterparts in *Drosophila*, TLRs signal through adaptor molecules (1) and could constitute an important and unrecognized component of innate immunity in humans. The TLR family is a phylogenetically conserved mediator of innate immunity that is essential for microbial recognition (2). TLRs characterized so far activate the MyD88/interleukin-1 receptor-associated kinase (IRAK) signaling pathway. Ten human homologs of TLRs (TLR1-10) have been described (3). TLR3 cDNA codes for a protein with approximate molecular weight of 120 kDa (4). TLR3 has a restricted expression pattern being expressed in dendritic cells (DC) (4-6). TLR3 mRNA expression was detected by in situ hybridization in DC and lymph nodes (6). The expression of TLR3 in a single cell type may indicate a specific role for this molecule in a restricted setting.

Antigen

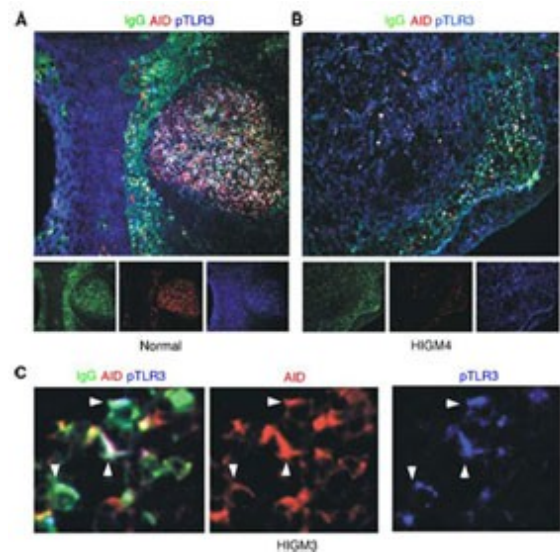
A portion of amino acids 750-800, containing a phosphorylated tyrosine residue at position 759, of human TLR3 was used as the immunogen.

Genebank Info (Protein)

NP_003256



Western blot analysis of phosphorylated TLR3 in (A) recombinant fusion protein containing a phosphorylated tyrosine at position 759 and (B) fusion protein containing an unphosphorylated tyrosine at position 759, using IMG-5348A at 0.1 ug/ml.



Immunofluorescence analysis of IgG, AID and TLR3 (IMG-5348) expression in a healthy donor (A) and a hyper-IgM (HIGM) syndrome patient (B and C). A and B: Paraformaldehyde-fixed, frozen tonsillar mucosa tissue sections. C: Paraformaldehyde-fixed, mucosal B cells from the colon lamina propria of the HIGM patient. Arrowheads indicate cells co-expressing phospho TLR3, AID, and IgG. Data courtesy of W. Xu. et. al., and the *Journal of Immunology*

Related Products

1. IMG-2203 [Poly(I).Poly(C), TLR3 ligand]

Reference

1. Muzio M, Bosisio D, Polentarutti N, D'amico G, Stoppacciaro A, Mancinelli R, van't Veer C, Penton-Rol G, Ruco LP, Allavena P, Mantovani A. *J Immunol* 164(11):5998-6004 (2000).
2. Muzio M, Natoli G, Saccani S, Levrero M, and Mantovani A. *J. Exp. Med.* 187: 2097-2101 (1998).

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3. Medzhitov R and Janeway CA. *Cell* 91: 295-298 (1997).
4. Chuang TH and Ulevitch RJ. *Biochim. Biophys. Acta* 1518 (1-2): 157-161 (2001).
5. Rock FL., Hardiman G., Timans JC., Kastelein RA. and Bazan JF. *Proc. Natl. Acad. Sci. U.S.A.* 95 (2), 588-593 (1998).
6. Muzio M, Polentarutti N, Bosisio D, Prahladan MK, Mantovani A. *J Leukoc Biol* 67(4):450-456 (2000).
7. Sarkar SN, Peters KL, Elco CP, Sakamoto S, Pal S& Sen GC. *Nature Structural & Molecular Biology*, 11, 1060-1067 (2004).

Product Citations

1. Viral double-stranded RNA triggers Ig class switching by activating upper respiratory mucosa B cells through an innate TLR3 pathway involving BAFF. Xu W, PA Santini, AJ Matthews, A Chiu, A Plebani, B He, K Chen and A Cerutti. *J Immunol* 181:276-287 (2008). IHC (F):Fig 4A and B, Paraformaldehyde-fixed, frozen tonsillar mucosa human tissue sections from healthy and hyper-IgM syndrome (HIGM) donors, respectively. IF/ICC: Fig 4C, mucosal B cells from the colon lamina propria of the HIGM donor.
2. Small interfering RNA-induced TLR3 activation inhibits blood and lymphatic vessel growth. Cho WG, RJC Albuquerque, ME Kleinman, V Tarallo, A Greco, M Nozaki, MG Green, JZ Baffi, BK Ambati, M De Falco, JS Alexander, A Brunetti, S De Falco, J Ambati. *PNAS* 106:7137-7142 (2009). IMGENEX products cited.1. IMG-516 (TLR3 pAb): IHC (frozen), Figs 3A,B and S1A, B (mouse corneas and skeletal muscle) .2. IMG-5348A [TLR3/CD283 (Phospho Tyr 759)]: WB, Fig 4D (mouse primary lymphatic endothelial cell cultures). Note: exposure to 21nt-siRNA-luciferase triggered TLR3 phosphorylation with 5 min after stimulation. .

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