



Qty: 100 µg/400 µL

Rabbit anti-TLR4 (C-term)

Catalog No. 48-2300

Lot No.

Rabbit anti-TLR4 (C-term)

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.678

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the mouse TLR4 protein (Accession# NP_067272, Q9QUK6), which is identical to rat and 94% homologous to human.

SPECIFICITY

This antibody is specific for the TLR4 (Toll-like receptor 4, CD284, Ly87, Lps, Ran/M1, Rasl2-8) protein. On Western blots, it identifies the target band at ~95 kDa.

REACTIVITY

Reactivity has been confirmed with mouse spleen homogenates and human PC-3 cell lysates. Based on amino acid sequence homology, reactivity with rat is expected.

Sample	Western Blotting	Immuno-precipitation	Immuno-cytochemistry
Human	+++	0	ND
Mouse	+++	0	ND
Rat	ND	ND	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI482300

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BACKGROUND

Toll-like receptors (TLRs) are a family of signaling molecules that are required for innate responses to pathogen-derived substances such as Lipopolysaccharides (LPS), proteoglycans and bacterial DNA. TLRs have been shown to initiate inflammatory responses upon recognition of pathogen-derived substances.¹

TLR4 is expressed by peripheral blood monocytes and a small population of B-cells and is also expressed in human placenta. Mammalian cells respond to LPS by activating TLR4.^{1,2} TLR4 initiates a cascade of serine/threonine kinases such as IL-1 receptor-associated kinase (IRAK) in response to LPS, resulting in downstream activation of NF κ B and c-Jun NH₂-terminal kinase which eventually leads to the transcription of genes involved in inflammation.^{3,4}

REFERENCES

1. Aderem A, et al. *Nature* 406(6797):782-787, 2000.
2. Blander JM, et al. *Science* 304(5673):1014-1018, 2004.
3. Hsu LC, et al. *Nature* 428(6980):341-345, 2004.
4. Zacharowski K, et al. *Proc Natl Acad Sci USA* 103(16):6392-6397, 2006.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose 4B	10-1041
rec-Protein G	Sepharose 4B	10-1241
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

Conjugate	Goat anti-rabbit IgG (H+L)	Goat anti-mouse IgG (H+L)	Ex/Em*	Fluorescence similar to--
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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