TLR4 (MTS510): sc-13591

BACKGROUND

Six human homologs of the Drosophila Toll receptor were initially identified based on their sequence similarities and designated Toll-like receptors (TLR). Toll receptors are involved in mediating dorsoventral polarization in the developing Drosophila embryo and also participate in the host immunity. The TLR family of proteins are characterized by a highly conserved Toll homology (TH) domain, which is essential for Toll-induced signal transduction. TLR1, as well as the other TLR family members, are type I transmembrane receptors that characteristically contain an extracellular domain consisting of several leucine-rich regions along with a single cytoplasmic Toll/IL-1R-like domain. TLR2 and TLR4 are activated in response to lipopolysaccharide (LPS) stimulation, which results in the activation and translocation of NFkB and suggests that these receptors are involved in mediating inflammatory responses. Expression of TLR receptors is highest in peripheral blood leukocytes, macrophages, and monocytes. TLR6 is highly homologous to TLR1, sharing greater than 65% sequence identity, and, like other members of TLR family, it induces NFkB signaling upon activation.

CHROMOSOMAL LOCATION

Genetic locus: TLR4 (human) mapping to 9q33.1, LY96 (human) mapping to 8q21.11; Tlr4 (mouse) mapping to 4 C1, Ly96 (mouse) mapping to 1 A3.

SOURCE

TLR4 (MTS510) is a rat monoclonal antibody raised against Toll-like receptor 4 (TLR4)/MD-2 complex of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₂a in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Also available azide-free for inhibition of LPS-induced cytokine production, sc-13591 L, 200 µg/0.1 ml.

TLR4 (MTS510) is available conjugated to agarose (sc-13591 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13591 HRP), 200 µg/ml, for WB, IHC(PE) and ELISA; to either phycoerythrin (sc-13591 PE), fluorescein (sc-13591 FITC), Alexa Fluor® 546 (sc-13591 AF546), Alexa Fluor® 594 (sc-13591 AF594) or Alexa Fluor® 647 (sc-13591 AF647), 200 µg/ml, for WB (RGB), IF, IHC(PE) and FCM; and to either Alexa Fluor® 680 (sc-13591 AF680) or Alexa Fluor® 790 (sc-13591 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

APPLICATIONS

TLR4 (MTS510) is recommended for detection of TLR4/MD-2 complex of mouse, rat and human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Molecular Weight of glycosylated TLR4: 95/120 kDa.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

TLR4 (MTS510) PE: sc-13591 PE. FCM analysis of mouse peripheral blood leukocytes. Black line histogram represents the isotype control, normal rat IgG₂a PE: sc-2872.

SELECT PRODUCT CITATIONS


PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.