

DESCRIPTION

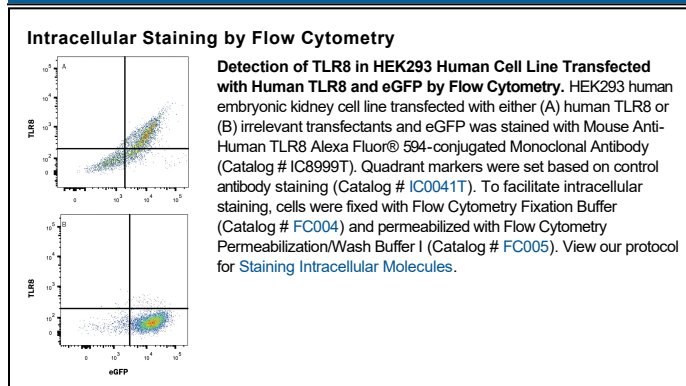
Species Reactivity	Human
Specificity	Detects human TLR8 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 935166
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human TLR8 Glu27-Thr827 Accession # Q9NR97
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	5 µL/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

TLR8, also designated as CD288 (cluster of differentiation 288), is a 135-140 kDa member of the Toll-like Receptor (TLR) family, TLR7/8/9 subfamily. TLRs make up a family of pattern recognition receptors that play important roles in the innate immune response. Broad classes of pathogens (e.g. viruses, bacteria, and fungi) constitutively express a set of mutation-resistant molecules called pathogen-associated molecular patterns (PAMPs). These microbial molecular markers may be composed of proteins, carbohydrates, lipids, nucleic acids and/or combinations thereof. Individual TLRs recognize distinct pathogen-associated PAMPs, initiating signaling cascades that promote the immune response. Cells known to express TLR8 include dermal and myeloid dendritic cells, monocytes, CD8⁺ T cells and colonic columnar epithelium. Structurally, TLRs are type I transmembrane receptors that possess varying numbers of extracellular N-terminal leucine-rich repeat (LRR) domains, followed by a cysteine-rich region, a TM segment, and an intracellular Toll/IL-1 R (TIR) motif. The TIR motif is common to the larger IL-1 R/TLR superfamily. Human TLR8 is a homodimeric endosomal receptor that recognizes single stranded RNA (ssRNA), and can recognize ssRNA viruses such as Influenza, Sendai, and Coxsackie B viruses. TLR8 binding to the viral RNA recruits MyD88 and leads to activation of the transcription factor NF-κB and an antiviral response. Over amino acids (aa) 27-827, human and mouse TLR8 share 67% amino acid sequence identity. Notably, rodent TLR8 does not possess an RQSYA sequence between aa 438-442, rendering it unresponsive to nucleic acid sequences that lack an accompanying poly-thymidine segment.

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