Mouse TNF RI/TNFRSF1A Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-425-PBG
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TNF RI/TNFRSF1A in direct ELISAs and Western blots. In direct ELISAs and Western blots (non-reducing conditions), less than 5% cross-reactivity with recombinant human TNF RI is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse TNF RI Ile22-Ala212 Accession # P25118
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.*

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Agonist Activity	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

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. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

TNF receptor 1 (TNF RI; also called TNF R-p55/p60, TNFRSF1A and CD120a) is a type I transmembrane protein that belongs to the TNF receptor superfamily (1, 2). TNF RI is widely expressed and is present on the cell surface as a trimer of 55 kDa subunits. It serves as a receptor for both TNF-α and TNF-β/lymphotoxin. Each subunit contains four TNF-α trimer-binding cysteine-rich domains (CRD) in its extracellular domain (ECD) (1-6). TNF-α binding to TNF R1 induces the sequestration of TNFRI in lipid rafts, where it activates NFκB and is cleaved by ADAM-17/TACE (7, 8). Release of the 28-34 kDa TNF RI ECD occurs constitutively, and in response to products of pathogens such as LPS, CpG DNA or *S. aureus* protein A (1, 7-12). Full-length TNF RI may also be released in exosome-like vesicles (12). Such release helps to resolve inflammatory reactions as it down-regulates cell surface TNF RI and provides soluble TNF RI to bind TNF-α (6, 13, 14). Exclusion from lipid rafts causes endocytosis of TNF RI complexes and induces apoptosis (7, 15). Although there is a second receptor for TNF-α (TNF R2), TNF RI is thought to mediate most of the cellular effects of TNF-α (3). TNF R1 is essential for proper development of lymph node germinal centers and Peyer's patches, and for combating intracellular pathogens such as Listeria monocytogenes (1-3). Mouse TNF RI is a 454 amino acid (aa) protein that contains a 21 aa signal sequence and a 191 aa ECD with a PLAD domain (6). This mediates constitutive trimer formation. The PLAD domain is followed by four CRDs, a 23 aa transmembrane domain, and a 219 aa cytoplasmic sequence that contains a neutral sphingomyelinase activation domain and a death domain (16). The ECD of mouse TNF RI shows 67%, 70%, 64%, 70% and 88% aa identity with canine, feline, procine, human and rat TNF RI, respectively; and it shows 23% aa identity with the ECD of TNF RII.

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