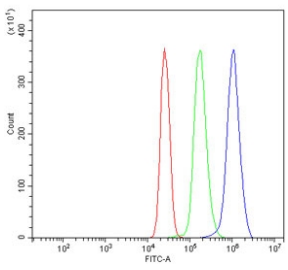
TNFRSF1A Antibody / TNF Receptor I Polyclonal Antibody (RQ6809)

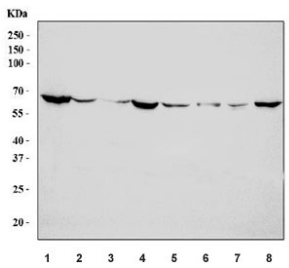
Catalog No.	Formulation	Size
RQ6809	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P19438
Applications	Western blot: 1-2ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This TNFRSF1A Antibody / TNF Receptor I Polyclonal Antibody is available for research use only.



TNFRSF1A Antibody FACS. Flow cytometry testing of human U937 cells with TNFRSF1A antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= TNFRSF1A antibody.



TNFRSF1A Antibody WB. Western blot testing of 1) human HepG2, 2) human HCCT, 3) human HCCP, 4) human HeLa, 5) rat brain, 6) rat C6, 7) mouse brain and 8) mouse Neuro-2a cell lysate with TNFRSF1A antibody. Predicted molecular weight ~51 kDa.

Description

TNFRSF1A Antibody / TNF Receptor I Polyclonal Antibody recognizes tumor necrosis factor receptor superfamily member 1A (TNFRSF1A), also known as TNF Receptor I, TNFR1, CD120a, or p55 TNF receptor. This cell surface receptor is a principal mediator of tumor necrosis factor alpha (TNF alpha) signaling and plays an important role in inflammation, immune regulation, cellular survival, and programmed cell death. TNFRSF1A belongs to the TNF receptor superfamily and is distinguished from TNFRSF1B (TNFR2) by the presence of an intracellular death domain that enables recruitment of proteins involved in apoptotic and inflammatory signaling.

TNF alpha binding promotes receptor-associated signaling complexes that determine how cells respond to inflammatory stimulation. The initial membrane-associated complex contains adaptor and regulatory proteins, including TRADD, RIPK1, TRAF2, and cellular inhibitor of apoptosis proteins. Ubiquitination of RIPK1 helps organize signaling events that activate the NF-kappaB and MAPK pathways, leading to inflammatory gene transcription, cytokine production, and expression of proteins that support cellular survival. These responses are tightly regulated to prevent excessive or prolonged inflammation.

Under conditions that disrupt survival signaling, TNFRSF1A can initiate programmed cell death through the formation of cytoplasmic complexes containing FADD and caspase-8. Activation of caspase-8 promotes extrinsic apoptosis, whereas inhibition of caspase-8 may permit RIPK1- and RIPK3-dependent necroptosis through phosphorylation of MLKL. The balance between these outcomes depends on receptor trafficking, ubiquitination, proteolytic processing, and the activity of regulatory proteins. TNFRSF1A can also undergo ectodomain shedding, producing soluble receptor fragments that influence TNF alpha availability and signaling intensity.

Dysregulated TNFRSF1A signaling contributes to chronic inflammation, autoimmune disorders, tissue damage, and neuroinflammatory processes. Pathogenic variants in TNFRSF1A cause TNF receptor-associated periodic syndrome (TRAPS), an inherited autoinflammatory disorder associated with recurrent inflammatory episodes. Altered receptor signaling is also relevant to cancer biology, where TNF alpha can promote either cellular survival or death depending on the surrounding molecular environment. TNFRSF1A Antibody provides a means of investigating receptor expression in relation to inflammatory signaling, NF-kappaB activation, apoptosis, and necroptosis.

Explore our TNFR1 Antibody (R32696) for additional research into TNF receptor signaling, inflammation, and programmed cell death, with Western blot validation using HeLa wild-type and TNFRSF1A knockout cell lysates.

Application Notes

Optimal dilution of the TNFRSF1A Antibody / TNF Receptor I Polyclonal Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids N336-A440) was used as the immunogen for the TNFRSF1A antibody.

Storage

After reconstitution, the TNFRSF1A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

TNFR1 antibody, TNF Receptor 1 antibody, TNF Receptor I antibody, Tumor Necrosis Factor Receptor 1 antibody, CD120a antibody, p55 TNF Receptor antibody, TNFR55 antibody, TNF-R1 antibody, TNFRI antibody, TNFRSF1A antibody

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