abcam

ab1793

Anti-TNF alpha antibody [52B83]

Anti-TNF alpha antibody [52B83] (ab1793) is a mouse monoclonal antibody detecting TNF alpha in **Western Blot, Flow Cytometry (Intra), IHC-Fr, ICC/IF, ELISA**. Suitable for **Guinea pig, Human, Mouse, Rhesus monkey**.

- Over 270 publications
- Trusted since 2002

Lab Essentials

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human TNF. Database link P01375
Clone number	52B83
Purification technique	Affinity purification Protein G
Specificity	This antibody detects both natural and recombinant TNFa. It does not cross-react with TNF beta or lymphotoxin. It reacts with free soluble (17 kDa) and membrane (26 kDa) human TNF-alpha. It does not react with receptor-bound TNF-alpha. Non-specific background staining is observed in connective tissues.
Light chain type	unknown
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ELISA

Expected

Species	Mouse, Guinea pig, Rhesus monkey, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Expected

Species	Mouse
Dilution info	2 µg/mL
Notes	TNF-alpha is normally secreted as a homotrimer with a molecular mass of 52 kDa. Monomeric TNF-alpha is 17.4 kDa A reduced sample treatment and 15% SDS-Page was used.

Species	Guinea pig
Dilution info	2 µg/mL
Notes	TNF-alpha is normally secreted as a homotrimer with a molecular mass of 52 kDa. Monomeric TNF-alpha is 17.4 kDa A reduced sample treatment and 15% SDS-Page was used.

Species	Rhesus monkey
Dilution info	2 µg/mL
Notes	TNF-alpha is normally secreted as a homotrimer with a molecular mass of 52 kDa. Monomeric TNF-alpha is 17.4 kDa A reduced sample treatment and 15% SDS-Page was used.

Species	Human
Dilution info	2 µg/mL
Notes	TNF-alpha is normally secreted as a homotrimer with a molecular mass of 52 kDa. Monomeric TNF-alpha is 17.4 kDa A reduced sample treatment and 15% SDS-Page was used.

IHC-P

Not recommended

Species	Mouse, Guinea pig, Rhesus monkey, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	5 µg/mL
Notes	-

Expected

Species	Human, Guinea pig, Rhesus monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/10
Notes	(methanol fixed cells) ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Human
Dilution info	-
Notes	(methanol fixed cells)

	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Guinea pig
Dilution info	-
Notes	(methanol fixed cells) ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Rhesus monkey
Dilution info	-
Notes	(methanol fixed cells) ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

IHC-Fr

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Species	Guinea pig
Dilution info	-
Notes	-

Species	Rhesus monkey
Dilution info	-
Notes	-

Species	Human
Dilution info	-
Notes	Fixed in acetone for 10 minutes

Target data

See full target information TNF

Function	Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia, Under certain conditions it can stimulate cell proliferation and induce cell differentiation. Impairs regulatory T-cells (Treg) function in individuals with rheumatoid arthritis via FOXP3 dephosphorylation. Up-regulates the expression of protein phosphatase 1 (PP1), which dephosphorylates the key 'Ser-418' residue of FOXP3, thereby inactivating FOXP3 and rendering Treg cells functionally defective (PubMed:23396208). Key mediator of cell death in the anticancer action of BCG-stimulated neutrophils in combination with DIABLO/SMAC mimetic in the RT4v6 bladder cancer cell line (PubMed:16829952, PubMed:22517918, PubMed:23396208). Induces insulin resistance in adipocytes via inhibition of insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake. Induces GKAP42 protein degradation in adipocytes which is partially responsible for TNF-induced insulin resistance (By similarity). Plays a role in angiogenesis by inducing VEGF production synergistically with IL1B and IL6 (PubMed:12794819). Promotes osteoclastogenesis and therefore mediates bone resorption (By similarity). The TNF intracellular domain (ICD) form induces IL12 production in dendritic cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Product Specifications

Anti-TNF alpha antibody [52B83] (ab1793) is a mouse monoclonal antibody and is validated for use in ELISA, Flow Cyt (Intra), ICC/IF, IHC-Fr, WB in guineapig, human, mouse, rhesus monkey samples.

Anti-TNF alpha antibody [52B83] (ab1793) specifically detects TNF alpha (UniProt ID: P01375; Molecular weight: 26kDa) and is sold in 50 µg selling sizes.

Quality and Validation

Abcam's high quality validation processes ensure Anti-TNF alpha antibody [52B83] (ab1793) has high sensitivity and specificity.

Anti-TNF alpha antibody [52B83] (ab1793) has been cited over 275 times in peer reviewed journals and is trusted by the scientific community.

Anti-TNF alpha antibody [52B83] (ab1793) has 16 independent reviews from customers.

Related Products
Conjugation-ready, carrier free format available for antibody clone 52B83 - ab233027.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

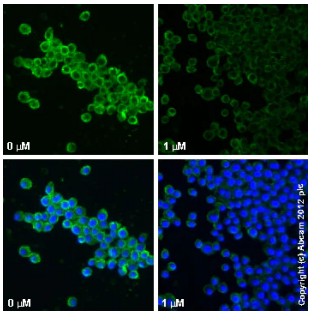
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

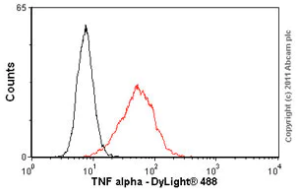
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-TNF alpha antibody [52B83] (ab1793)

TNF alpha Immunocytochemistry/ Immunofluorescence staining using mouse Anti-TNF alpha antibody

ab1793 staining TNFα in RAW 264.7 cells treated with (R,S)-rolipram (ab120029), by ICC/IF. Decrease in TNFα expression correlates with increased concentration of (R,S)-rolipram, as described in literature.
The cells were incubated at 37°C for 24h in media containing different concentrations of ab120029 ((R,S)-rolipram) in DMSO, fixed with 100% methanol for 5 minutes at -20°C and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with ab1793 (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight® 488 goat anti-mouse polyclonal antibody (ab96879) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.

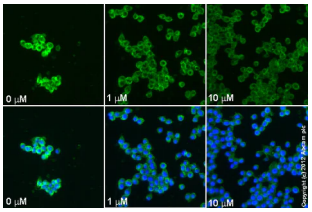


Flow Cytometry (Intracellular) - Anti-TNF alpha antibody [52B83] (ab1793)

TNF alpha Flow Cytometry (Intracellular) staining using mouse Anti-TNF alpha antibody

Overlay histogram showing RAW 264.7 cells stained with ab1793 (red line). The cells were fixed with methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab1793, 1/10 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a decreased signal in RAW 264.7 cells fixed with 4% paraformaldehyde (10 min) used under the same conditions.

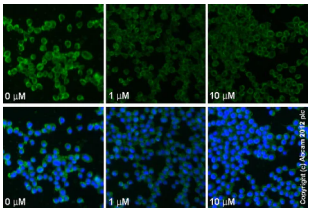
Please note that Abcam do not have data for use of this antibody on non-fixed cells. We welcome any customer feedback.



Immunocytochemistry/ Immunofluorescence - Anti-TNF alpha antibody [52B83] (ab1793)

TNF alpha Immunocytochemistry/ Immunofluorescence staining using mouse Anti-TNF alpha antibody

ab1793 staining TNFα in RAW 264.7 cells treated with (R)-(-)-rolipram (ab120031), by ICC/IF. Decrease in TNFα expression correlates with increased concentration of (R)-(-)-rolipram , as described in literature.
The cells were incubated at 37°C for 24h in media containing different concentrations of ab120031 ((R)-(-)--rolipram) in DMSO, fixed with 100% methanol for 5 minutes at -20°C and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with ab1793 (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight® 488 goat anti-mouse polyclonal antibody (ab96879) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.



Immunocytochemistry/ Immunofluorescence - Anti-TNF alpha antibody [52B83] (ab1793)

TNF alpha Immunocytochemistry/ Immunofluorescence staining using mouse Anti-TNF alpha antibody

ab1793 staining TNFα in RAW 264.7 cells treated with (S)-(+)-rolipram (ab120030), by ICC/IF. Decrease in TNFα expression correlates with increased concentration of (S)-(+)-rolipram , as described in literature.
The cells were incubated at 37°C for 24h in media containing different concentrations of ab120030 ((S)-(+)-rolipram) in DMSO, fixed with 100% methanol for 5 minutes at -20°C and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with ab1793(5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight® 488 goat anti-mouse polyclonal antibody (ab96879) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.

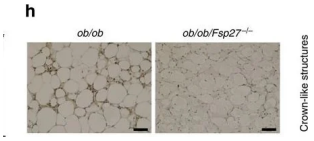


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Immunohistochemistry - Anti-TNF alpha antibody [52B83] (ab1793)

TNF alpha Immunohistochemistry staining using mouse Anti-TNF alpha antibody

Immunohistochemistry using Anti-TNF alpha antibody [52B83], ab1793. Publication image from Yu, M. et al., 2015, Nat Commun, 25565658. Legend direct from paper.

Reduced WAT inflammatory response in ob/ob/Fsp27−/− mice.Four-month-old chow-fed ob/ob and ob/ob/Fsp27−/− mice were used for the analyses in (a–i). (a) Gene expression profiling in the GWAT of ob/ob and ob/ob/Fsp27−/− mice. Green circles represent downregulated genes in the ob/ob/Fsp27−/− mice compared with ob/ob mice. The intensity of the green colour indicates the extent of downregulation. (b) Relative mRNA expression of F4/80, CD11c and other pro-inflammatory genes, or (c) anti-inflammatory genes in the GWAT of ob/ob and ob/ob/Fsp27−/− mice (n=4 per group). (d) F4/80 immunohistochemical analysis in the GWAT of ob/ob and ob/ob/Fsp27−/− mice. Scale bar, 64 μm. (e) Serum concentration of IL-6 (n=7 per group). (f) Serum concentration of TNFα (n=7 for ob/ob and n=9 for ob/ob/Fsp27−/−). (g) Serum concentration of adiponectin (n=8 per group). (h) TNFα immunohistochemical analysis in the GWAT of ob/ob and ob/ob/Fsp27−/− mice showing the CLSs (left). Right: statistic analysis of the CLSs per 1,000 adipocytes. Scale bar, 50 μm. (i) Relative mRNA levels of ASC, NLRP3, Caspase-1 and TXNIP in the GWAT of ob/ob and ob/ob/Fsp27−/− mice (n=3 per group). Quantitative data are presented as mean±s.e.m. Significance was established using a two-tailed Student’s t-test. Differences were considered significant at P<0.05. *P<0.05, **P<0.01, ***P<0.001.

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