abcam

Product datasheet

Recombinant mouse TNF alpha protein (Active) ab259411

2 References 5 Images

Description

Product name	Recombinant mouse TNF alpha protein (Active)
Biological activity	Fully active compared to a standard. The ED_{50} as determined by the dose-dependant Killing/apoptosis of L-929 cells is 1.12ng/mL corresponding to a Specific Activity of 8.93×10^5 IU/mg.
Purity	>= 95 % SDS-PAGE. Purity by HPLC >=95%.
Endotoxin level	< 0.005 Eu/µg
Expression system	HEK 293 cells
Accession	P06804
Protein length	Full length protein
Animal free	Yes
Carrier free	Yes
Nature	Recombinant
Species	Mouse
Sequence	GPQRDEKFPNGLPLISSMAQTLTLRSSSQNSSDKPVAHV VANHQVEEQLE WLSQRANALLANGMDLKDNQLVVPADGLYLVYSQVLF KGQGCPDYVLL THTVSRFAISYQEKVNLLSAVKSPCPKDTPEGAELKPWYE PIYLGGVFQL EKGDQLSAEVNLPKYLDFAESGQVYFGVIAL
Predicted molecular weight	20 kDa
Molecular weight information	M + 1.5 Da (Calc mass 19797.5 Da). GPQRDEKFPNGLPLISSMAQTLTLRSSSQNSSDKPVAHVVANHQVEEQLEWLSQRANALLAN GMDLKDNQLVVPADGLYLVYSQVLFKGQGCPDYVLLTHTVSRFAISYQEKVNLLSAVKSPCPK DTPEGAELKPWYEPIYLGGVFQLEKGDQLSAEVNLPKYLDFAESGQVYFGVIAL
Amino acids	57 to 235
Additional sequence information	N-terminal Glycine

Specifications

Specifications

Our **Abpromise guarantee** covers the use of **ab259411** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Cell Culture Sandwich ELISA SDS-PAGE Functional Studies HPLC Mass Spectrometry
Form	Lyophilized
Additional notes	This protein is filter sterilised prior to aliquoting and lyophilisation. All aliquoting and lyophilisation steps are performed in a sterile environment

Preparation and Storage

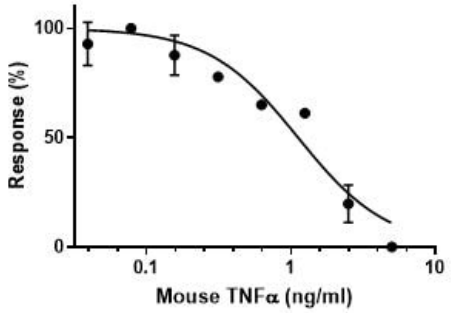
Stability and Storage	Shipped at Room Temperature. Store at Room Temperature. pH: 6.00 Constituents: 0.727% Dibasic monohydrogen potassium phosphate, 0.248% Monobasic dihydrogen potassium phosphate, 10.26% Trehalose Buffer lyophilized from. This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Reconstitute with phosphate buffered saline.Store lyophilized form at room temperature. Reconstitute, aliquot and store at -80°C for 12 months or +4°C for 1 week.Avoid repeated freeze-thaw. Lyophilized contents may appear as either a translucent film or a white powder. This variance does not affect the quality of the product.

General Info

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.
Involvement in disease	Genetic variations in TNF are a cause of susceptibility psoriatic arthritis (PSORAS) [MIM:607507]. PSORAS is an inflammatory, seronegative arthritis associated with psoriasis. It is a heterogeneous disorder ranging from a mild, non-destructive disease to a severe, progressive, erosive arthropathy. Five types of psoriatic arthritis have been defined: asymmetrical oligoarthritis characterized by primary involvement of the small joints of the fingers or toes; asymmetrical arthritis which involves the joints of the extremities; symmetrical polyarthritis characterized by a rheumatoidlike pattern that can involve hands, wrists, ankles, and feet; arthritis mutilans, which is a rare but deforming and destructive condition; arthritis of the sacroiliac joints and spine (psoriatic spondylitis).
Sequence similarities	Belongs to the tumor necrosis factor family.
Post-translational	The soluble form derives from the membrane form by proteolytic processing.

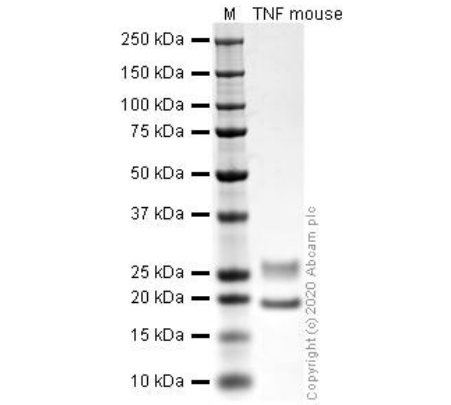
modifications	The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1. O-glycosylated; glycans contain galactose, N-acetylgalactosamine and N-acetylneuraminic acid.
Cellular localization	Secreted and Cell membrane.

Images



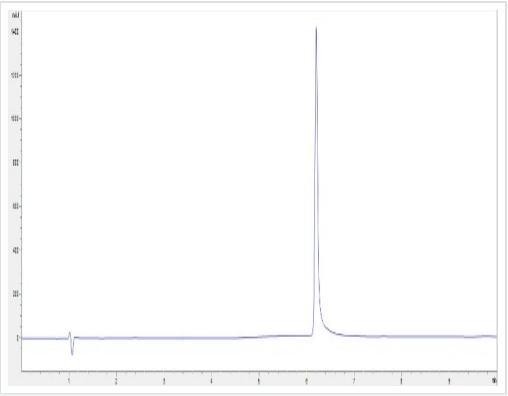
Functional Studies - Recombinant Mouse TNF alpha protein (ab259411)

Fully active compared to a standard. The ED_{50} as determined by the dose-dependant Killing/apoptosis of L-929 cells is 1.12ng/mL corresponding to a Specific Activity of 8.93×10^5 IU/mg.



SDS-PAGE - Recombinant mouse TNF alpha protein (ab259411)

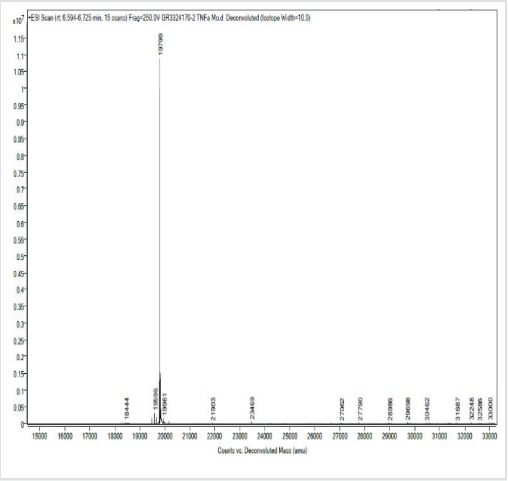
SDS-PAGE analysis of ab259411.



HPLC - Recombinant mouse TNF alpha protein (ab259411)

Purity 100%.

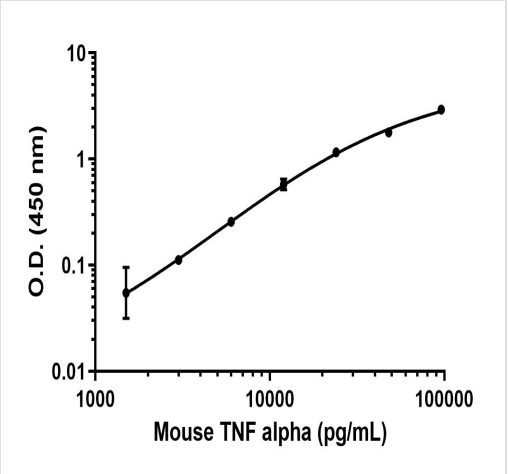
The spectrum was recorded using a 1260 Infinity II HPLC system with DAD and a MabPac RP column (3.0x100 mm, 4 µm). 5 µL of purified protein was injected and the gradient run from 80 % water:TFA (99.9:0.1 v/v) and 20 % acetonitrile:water:TFA (90:9.9:0.1 v/v/v) to 20 % water:TFA (99.9:0.1 v/v) and 80 % acetonitrile:water:TFA (90:9.9:0.1 v/v/v) within 3 minutes followed by an isocratic step for another 3 min. Flow rate was 0.5 mL/min and the column compartment temperature was 50 °C.



Mass Spectrometry - Recombinant Mouse TNF alpha protein (ab259411)

M + 1.5 Da (Calc mass 19797.5 Da).

The spectrum was recorded with a 6545XT AdvanceBio LC/Q-TOF (Agilent Technologies) and a MabPac RP column (42.1x50 mm, 4 µm, Thermo Scientific). 5 µL of purified protein was injected and the gradient run from 85 % water:FA (99.9:0.1 v/v) and 15 % acetonitrile:FA (90:9.9:0.1 v/v/v) to 55 % water:FA (99.9:0.1 v/v) and 45 % acetonitrile:FA (90:9.9:0.1 v/v/v) within 3 minutes followed by an isocratic step for another 2.5 min. Flow rate was 0.4 mL/min and the column compartment temperature was 60 °C. Data was analysed and deconvoluted using the Bioconfirm software (Agilent Technologies).



Sandwich ELISA - Recombinant mouse TNF alpha protein (Active) (ab259411)

Background subtracted standard curve using Mouse TNF alpha Antibody Pair - BSA and Azide free (**ab241672**) and Recombinant mouse TNF alpha protein (Active) (ab259411) in sandwich ELISA. The ELISA was performed using the components of the corresponding SimpleStep® kit, which uses the same antibody pair with a different formulation and format.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors