Recombinant human TNF alpha protein ab9642

Overview

Product name: Recombinant human TNF alpha protein
Protein length: Full length protein

Description

Nature: Recombinant
Source: Escherichia coli
Amino Acid Sequence
Accession: P01375
Species: Human
Sequence:
VRSSRTPSD KPVAHV/VANP QAEGQLOWLN RRRANALLANG VELRDNLVY PSEGGLYINGS QVLFKGQGCP STHVLLTHTISIAVSYGTK VNLLSAIKSP CQRETEGAE AKPWYEPYML GGVQLEKGD RLSAENRP DYLDFAESGV YFGIAL

Molecular weight: 17 kDa
Amino acids: 77 to 233

Specifications

Our Abpromise guarantee covers the use of ab9642 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Biological activity
The ED$_{50}$ as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D is $\leq 0.05 \text{ ng/mL}$, corresponding to a specific activity of $\geq 2 \times 10^7 \text{ units/mg}$.

Applications
- Functional Studies
- Sandwich ELISA
- SDS-PAGE

Endotoxin level: $< 0.100 \text{ Eu/µg}$
Purity: $> 98\% \text{ SDS-PAGE}$.
Sterile filtered. Greater than 97% by SDS-PAGE and HPLC analyses.

Form: Lyophilised
Additional notes
Lots prior to June 2015 contain 0.036% Tris (including lots GR157466-11, -12 and -13).

Preparation and Storage

Stability and Storage
Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Constituents: 0.049% Sodium phosphate, 0.12% Sodium chloride
This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitution
Reconstitute with dH2O to make a final concentration between 0.1 to 1.0 mg/ml.

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 modifications
The soluble form derives from the membrane form by proteolytic processing. 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-acetylenuraminic acid.

Cellular localization
Secreted and Cell membrane.

Images
Sandwich ELISA - Recombinant human TNF alpha protein (ab9642)

Standard curve for TNF alpha (Analyte: ab9642); dilution range 1pg/ml to 1µg/ml using Capture Antibody Mouse monoclonal [2C8] to TNF alpha (ab8348) at 5µg/ml and Detector Antibody Rabbit polyclonal to TNF alpha (ab9635) at 0.5µg/ml.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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