

Anti-TNF- α Affibody[®] Molecule, Unconjugated

BACKGROUND

Human TNF- α (Tumour Necrosis Factor-alpha) is a nonglycosylated protein of 17 kD belonging to the TNF superfamily of cytokines. TNF- α is produced by activated macrophages and T lymphocyte and forms trimers spontaneously. TNF- α shows a wide spectrum of biological activities that are mediated by binding to TNFR1 and TNFR2 receptors. Besides causing cytolysis and cytostasis of many tumour cell lines in vitro, TNF- α has an important role in host defences against pathogens. However, excess TNF- α seen in sepsis and diseases of autoimmune character, has severe pathological consequences and the neutralisation of TNF- α has been a successful treatment procedure for rheumatoid arthritis.

The Anti-TNF- α Affibody[®] molecule was selected against human TNF- α . The Anti-TNF- α Affibody[®] molecule is an ideal affinity ligand as a capture reagent in ELISA and as detection reagent in dot blot. The Anti-TNF- α Affibody[®] molecule is modified with a unique C-terminal cysteine for directed single-point chemical modification, facilitating labeling with fluorescent dyes, biotin or coupling to matrices.

PRODUCT INFORMATION

Product name: Anti-TNF- α Affibody[®] molecule, Unconjugated.

Catalog number:

1 mg: 10.0841.01.0010

5 mg: 10.0841.01.0050

Source: Recombinant protein produced in *E. coli*.

Specificity: Anti-TNF- α Affibody[®] molecule binds to human cytokine tumor necrosis factor α , TNF- α . Cross reactivity with other species has not been tested.

MW: 13.7 kDa

Theoretical pI: 5.1

Purity: >98% as determined by SDS-PAGE (Coomassie blue staining) and RP-HPLC analysis.

Tested applications: Suitable as capture reagent in ELISA and as detection reagent in dot blot.

Conjugation: The Affibody[®] molecule contains a unique C-terminal cysteine ideal for directed chemical modifications. However, tail-to-tail dimers are spontaneously generated via a disulfide bridge between the C-terminal cysteines. Prior to coupling via the C-terminal cysteine, the Affibody[®] molecule needs to be reduced to expose the reactive cysteine residue. Recommended reducing condition is 20 mM DTT at a pH above 7.5 and incubation at room temperature for 2 hours. Remove excess DTT by passage through a desalting column, not by dialysis.

Form: Lyophilized protein. Lyophilized from 10 mM NH₄HCO₃.

Storage: +4°C is recommended for lyophilized protein. For reconstituted protein in physiological buffer, short-term storage at +4°C is recommended. For long-term storage, the protein solution should be aliquoted and then stored at -20°C.

Shipping: At ambient temperature.

Stability: There is no decrease in performance of the reconstituted Affibody[®] molecule (1 mg/ml in PBS) after 10 repeated freeze and thaw cycles or after storage for 2 weeks in room temperature.

Product support: www.affibody.com/shop
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LIMITATIONS

Warranty: Affibody[®] products are warranted to meet stated product specifications and to conform to label descriptions when used and stored properly. Unless otherwise stated, this warranty is limited to one year from date of sales for products used, handled and stored according to Affibody AB's instructions. Affibody AB's sole liability is limited to replacement of the product or refund of the purchase price. Affibody[®] products are supplied for research use only. They are not intended for medicinal, diagnostic or therapeutic use. Affibody[®] products may not be resold, modified for resale or used to manufacture commercial products without prior written approval from Affibody AB.

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