

Anti-Insulin Affibody[®] Molecule, Unconjugated

BACKGROUND

The 5.7 kDa polypeptide hormone insulin is structured as two polypeptide chains, the 21 amino acid A chain and the 30 amino acid B chain, linked by two disulphide bonds. Insulin is synthesized in the beta cells of the islets of Langerhans in the pancreas as a prohormone; proinsulin that is later transformed by proteolytic action into the active hormone. Insulin exerts multiple actions throughout the body to regulate the energy metabolism. Its anabolic action includes build-up and storage of glycogen and fat.

The Anti-Insulin Affibody[®] molecule was selected against recombinant human insulin (chain A and B). The Anti-Insulin Affibody[®] molecule is excellent for immunohistochemical staining of frozen and paraffin embedded tissue sections and an ideal affinity ligand for chromatography applications. The 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-Insulin Affibody[®] molecule, Unconjugated.

Catalog number:

1 mg: 10.0814.01.0010

5 mg: 10.0814.01.0050

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

Specificity: Anti-Insulin Affibody[®] molecule binds to human, mouse and rat insulin.

MW: 14.0 kDa

Theoretical pI: 5.3

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

Tested applications: Affinity chromatography, immunohistochemical staining of frozen and paraffin embedded tissue sections.

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 confirm 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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Rev 061108