

## Anti-Transthyretin Affibody<sup>®</sup> Molecule, Unconjugated

### BACKGROUND

Transthyretin (TTR, Prealbumin) is synthesized by the liver as a 127 amino acid non-glycosylated polypeptide chain. The entity, circulating in plasma, is a structurally stable tetramer composed of four identical monomers. It was originally called pre-albumin, however it has no structural relationship with albumin. The main function of transthyretin is transport of thyroxin and retinol binding protein i.e. vitamin A. The transthyretin concentration in plasma ranges from 20-40 mg/ml and the level is decreased in subjects suffering from malnutrition or chronic inflammation. In hereditary transthyretin amyloidosis, mutated transthyretin causes aggregation and formation of amyloid deposits in tissues with peripheral neuropathy as the major clinical manifestation.

The Anti-Transthyretin Affibody<sup>®</sup> molecule was selected against human transthyretin. Cross reactivity with other species has not been tested. The Anti-Transthyretin Affibody<sup>®</sup> molecule is an ideal affinity ligand as capture reagent in ELISA and as capture molecule in affinity chromatography. The Anti-Transthyretin Affibody<sup>®</sup> molecule is modified with a unique C-terminal cysteine for directed single-point chemical modification, facilitating coupling to matrices.

### PRODUCT INFORMATION

**Product name:** Anti-Transthyretin Affibody<sup>®</sup> molecule, unconjugated

**Catalog number:**

500 µg: 10.1393.01.0005

5 mg: 10.1393.01.0050

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

**Specificity:** Anti-Transthyretin Affibody<sup>®</sup> molecule binds to human transthyretin. Cross reactivity with other species has not been tested.

**MW:** 13.6 kDa

**Theoretical pI:** 8.5

**Purity:** >98% as determined by SDS-PAGE and RP-HPLC analysis.

**Tested applications:** ELISA.

**Conjugation and immobilization:**

The Affibody<sup>®</sup> 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<sup>®</sup> molecule needs to be reduced to expose the reactive cysteine residue. Recommended reducing condition is 20 mM DTT at a pH between 7 and 8, and incubation at room temperature for 1-2 hours. Remove excess DTT by passage through a desalting column, not by dialysis.

**Form:** Lyophilized protein. Lyophilized from 5 mM NH<sub>4</sub>HCO<sub>3</sub>.

**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 first be aliquoted and stored frozen at -20°C.

**Shipping:** At ambient temperature.

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

**Product support:** [www.affibody.com/shop](http://www.affibody.com/shop)  
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### LIMITATIONS

Warranty: Affibody<sup>®</sup> 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<sup>®</sup> products are supplied for research use only. They are not intended for medicinal, diagnostic or therapeutic use. Affibody<sup>®</sup> 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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