

Anti-EGFR Affibody[®] Imaging Agent

BACKGROUND

The Epidermal Growth Factor Receptor (EGFR, ErbB) is a cell surface glycoprotein of approximately 135 kDa (unglycosylated). There are several alternatively spliced forms of EGFR including a secreted soluble form. The EGFR belongs to the family tyrosine kinase receptors which are characterized by an extracellular ligand-binding domain, a single transmembrane and an intracellular domain responsible for transducing the signal. The receptor dimerizes upon binding to EGFR and the transduced signal stimulates cell growth and differentiation. The EGFR is over expressed or mutated in many types of cancers and the receptor as well as the down stream signaling molecules are subjects to several cancer therapeutic interventions.

The Anti-EGFR Affibody[®] molecule is a specific affinity ligand selected against the extra cellular domain of EGFR.

The Anti-EGFR Affibody[®] imaging agent is modified with a unique C-terminal cysteine for directed single-point chemical modification, facilitating labeling to thiol reactive reagents such as various fluorescent dyes.

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PRODUCT INFORMATION

Product name: Anti-HER2 Affibody[®] imaging agent

Catalog number:

100 µg: 10.2023.01.0001

500 µg: 10.2023.01.0005

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

Specificity: Anti-EGFR Affibody[®] Imaging Agent binds to the extracellular domain of human epidermal growth factor receptor (EGFR, ErbB). Cross reactivity with other species has not been tested.

Mw: 6.7 kDa

Theoretical pI: 4.6

Purity: >95 % as determined by RP-HPLC analysis.

Applications: Small animal optical imaging.

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 at room temperature.

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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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