

Anti-HER2 Affibody[®] Molecule, Unconjugated

BACKGROUND

The human epidermal growth factor receptor HER2 (Her2/neu, ErbB2, or c-erb-b2) is a growth factor receptor that is expressed on many cell types. HER2-proteins are over-expressed in a number of cancer types and assemble in homo- or heterodimers to form functional signaling units. When over-expressed, homo- or heterodimers of HER2 cause increased proliferation, decreased apoptosis, enhanced tumor cell motility and neo-angiogenesis – all being traits strongly associated with tumor formation. Thus, the her2 gene is considered an oncogene.

The Anti-HER2 Affibody[®] molecule is a highly specific affinity ligand selected against the extra cellular domain of HER2. The molecule can advantageously be used for fluorescence and immunohistochemical studies of HER2-expression on cells and frozen tissue sections. Staining of paraffin embedded tissues is not recommended. The Anti-HER2 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-HER2 Affibody[®] molecule, unconjugated.

Catalog number:

100 µg: 10.0817.01.0001

500 µg: 10.0817.01.0005

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

Specificity: Anti-HER2 Affibody[®] molecule binds to extracellular domain of human epidermal growth factor receptor 2 (HER2). Cross reactivity with other species has not been tested.

MW: 14.0 kDa

Theoretical pl: 9.0

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

Tested applications: Fluorescence and immunohistochemical staining of cells and frozen tissue sections, flow cytometry.

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.

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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