

# Affibody® Imaging Agent, Negative Control ab214799

## 1 References

### Overview

<b>Product name</b>	Affibody® Imaging Agent, Negative Control
<b>Specificity</b>	Ab214799 binds to a protein of bacterial origin. It does not bind to human HER2 or EGFR. Cross reactivity with other species has not been tested.
<b>General notes</b>	<p>Ab214799 is to be used as a negative control for <a href="#">ab89832</a> (ErbB 2 Affibody® Molecule Imaging Agent).</p> <p>Ab214799 (denoted Z03638) is an engineered variant of the Taq Polymerase binder Z01155, where 11 amino acids in the scaffold have been changed in order to resemble the Affibody® Imaging Agents.</p> <p>Ab214799 contains a unique C-terminal cysteine 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.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Constituent: 0.079% Ammonium bicarbonate
<b>Purification notes</b>	>95% as determined by RP-HPLC analysis.
<b>Function</b>	<p>Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Regulates outgrowth and stabilization of peripheral microtubules (MTs). Upon ERBB2 activation, the MEMO1-RHOA-DIAPH1 signaling pathway elicits the phosphorylation and thus the inhibition of GSK3B at cell membrane. This prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization. In the nucleus is involved in transcriptional regulation. Associates with the 5'-TCAAATTC-3' sequence in the PTGS2/COX-2 promoter and activates its transcription. Implicated in transcriptional activation of CDKN1A; the function involves STAT3 and SRC. Involved in the transcription of rRNA genes by RNA Pol I and enhances protein synthesis and cell growth.</p>

<b>Tissue specificity</b>	Expressed in a variety of tumor tissues including primary breast tumors and tumors from small bowel, esophagus, kidney and mouth.
<b>Involvement in disease</b>	Hereditary diffuse gastric cancer Glioma Ovarian cancer Lung cancer Gastric cancer Chromosomal aberrations involving ERBB2 may be a cause gastric cancer. Deletions within 17q12 region producing fusion transcripts with CDK12, leading to CDK12-ERBB2 fusion leading to truncated CDK12 protein not in-frame with ERBB2.
<b>Sequence similarities</b>	Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.
<b>Post-translational modifications</b>	Autophosphorylated. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit (Probable). Ligand-binding increases phosphorylation on tyrosine residues (PubMed:27134172). Signaling via SEMA4C promotes phosphorylation at Tyr-1248 (PubMed:17554007). Dephosphorylated by PTPN12 (PubMed:27134172).
<b>Cellular localization</b>	Cytoplasm. Nucleus and Cell membrane. Cytoplasm, perinuclear region. Nucleus. Translocation to the nucleus requires endocytosis, probably endosomal sorting and is mediated by importin beta-1/KPNB1.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors