Datasheet for ABIN4949022

EGFR Protein (AA 25-378) (His tag,AVI tag,Biotin)

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Overview

Quantity:	200 µg
Target:	EGFR
Protein Characteristics:	AA 25-378
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This EGFR protein is labelled with His tag,AVI tag,Biotin.
Application:	Functional Studies (Func)

Product Details

Brand:	MABSol®,PrecisionAvi
Sequence:	AA 25-378
Specificity:	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Characteristics:	This protein carries an Avi tag (Avitag™) at the C-terminus, followed by a polyhistidine tag. The protein has a calculated MW of 41.3 kDa. As a result of glycosylation, the protein migrates as 60-70 kDa under reducing (R) condition, and 60-70 kDa under non-reducing (NR) condition (SDS-PAGE).
Purity:	>95 % as determined by SDS-PAGE.

Product Details

Endotoxin Level:	Less than 1.0 EU per μg by the LAL method.

Target Details

Target:	EGFR
Alternative Name:	EGF R (EGFR Products)
Background:	The epidermal growth factor receptor (EGFR, ErbB-1, HER1 in humans) is the cell-surface receptor for members of the epidermal growth factor family (EGF-family) of extracellular protein ligands. The epidermal growth factor receptor is a member of the ErbB family of receptors, a subfamily of four closely related receptor tyrosine kinases: EGFR (ErbB-1), HER2/c-neu (ErbB-2), Her 3 (ErbB-3) and Her 4 (ErbB-4). Mutations affecting EGFR expression or activity could result in cancer. The type III EGF deletion-mutant receptor (EGFRvIII) is the most common mutation and was first identified in primary human glioblastoma tumors, EGFR gene amplification is correlated with the structural rearrangement of the gene. The EGFRvIII gene has an in-frame deletion of 801 base pairs, corresponding to exons 2-7 in the mRNA, resulting in the deletion of amino acids 30-297 in the extracellular domain and the generation of a glycine at the fusion point.
Molecular Weight:	42.2 kDa
NCBI Accession:	NP_001333870
UniProt:	P00533
Pathways:	NF-kappaB Signaling, RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Stem Cell Maintenance, Hepatitis C, Positive Regulation of Response to DNA Damage Stimulus, Interaction of EGFR with phospholipase C-gamma, Thromboxane A2 Receptor Signaling, EGFR Downregulation, S100 Proteins

Application Details

Comment:	Ready-to-use AvitagTM biotinylated protein: The product is exclusively produced using the AvitagTM technology. Briefly, a unique 15 amino acid peptide, the Avi tag, is introduced into the recombinant protein during expression vector construction. The single lysine residue in the Avi tag is enzymatically biotinylated by the E. Coli biotin ligase BirA. This single-point enzymatic labeling technique brings many advantages for commonly used binding assays. The biotinylation happens on the lysine residue of Avi tag, and therefore does

Application Details

	NOT interfere with the target protein's natural binding activities. In addition, when immobilized on an avidin-coated surface, the protein orientation is uniform because the position of the Avi tag in the protein is precisely controlled.
Restrictions:	For Research Use only

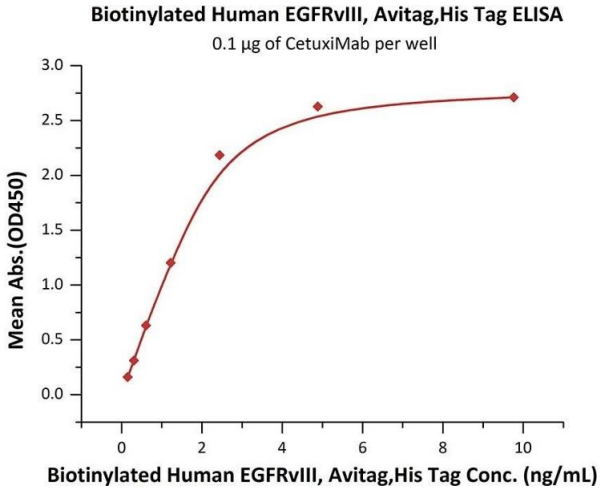
Handling

Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

Publications

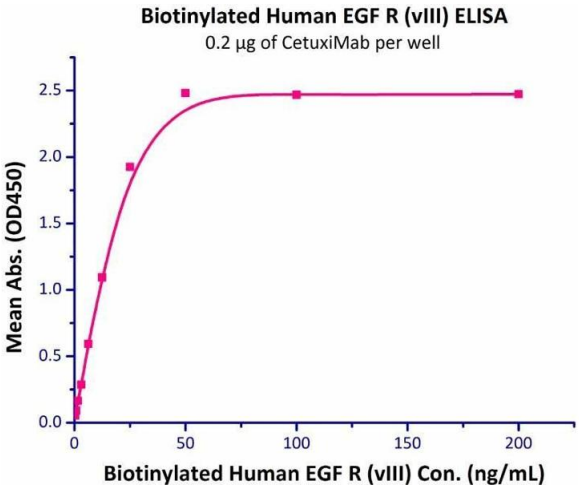
Product cited in:	Mortensen, Skovsgaard, Okholm, Scavenius, Dupont, Rosen, Enghild, Kjems, Gothelf: "Small-Molecule Probes for Affinity-Guided Introduction of Biocompatible Handles on Metal-Binding Proteins." in: **Bioconjugate chemistry**, Vol. 29, Issue 9, pp. 3016-3025, (2019) (PubMed).

Images



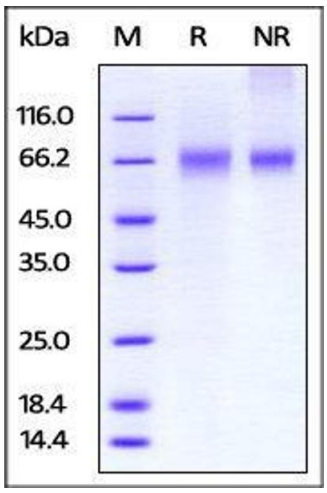
ELISA

Image 1. Immobilized CetuxiMab at 1 μg/mL (100 μL/well) can bind Biotinylated Human EGFRvIII, Avitag,His Tag (ABIN4949021,ABIN4949022) with a linear range of 0.2-2 ng/mL (Routinely tested).



Binding Studies

Image 2. Immobilized CetuxiMabat 2 µg/mL (100 µl/well) can bind Biotinylated Human EGFRvIII (Cat# EGR-H82E0) with a linear range of 0.4-25 ng/mL.



SDS-PAGE

Image 3. Biotinylated Human EGFRvIII, His Tag on SDS-PAGE under reducing (R) and no-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.