Datasheet for ABIN5674594

EGFR Protein (AA 25-645) (His tag,AVI tag,Biotin)

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Overview

Quantity:	200 µg
Target:	EGFR
Protein Characteristics:	AA 25-645
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.

Product Details

Brand:	PrecisionAvi
Sequence:	AA 25-645
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 a polyhistidine tag at the C-terminus, followed by an Avi tag. The protein has a calculated MW of 72.3 kDa. The protein migrates as 100-125 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Purity:	>90 % as determined by SDS-PAGE.
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.
Molecular Weight:	72.3 kDa
NCBI Accession:	NP_005219
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 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

Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

Publications

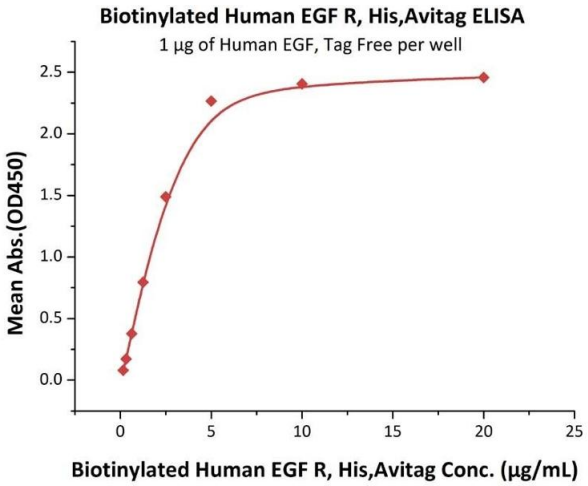
Product cited in:

Tang, Zheng, Melo, Mabardi, Castaño, Xie, Li, Kudchodkar, Wong, Jeng, Maus, Irvine: "Enhancing T cell therapy through TCR-signaling-responsive nanoparticle drug delivery." in: **Nature biotechnology**, Vol. 36, Issue 8, pp. 707-716, (2019) (PubMed).

Choi, Yu, Castano, Bouffard, Schmidts, Larson, Bailey, Boroughs, Frigault, Leick, Scarfò, Cetrulo, Demehri, Nahed, Cahill, Wakimoto, Curry, Carter, Maus: "CAR-T cells secreting BiTEs circumvent antigen escape without detectable toxicity." in: **Nature biotechnology**, (2019) (PubMed).

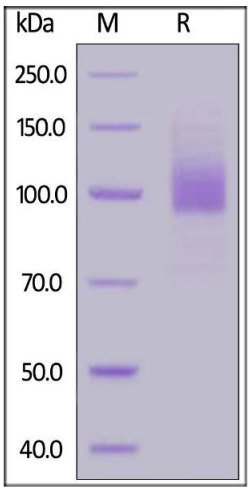
Yu, Pegram, Bigner, Chandramohan: "Development and validation of a cell-based fluorescent method for measuring antibody affinity." in: **Journal of immunological methods**, Vol. 442, pp. 49-53, (2017) (PubMed).

Images



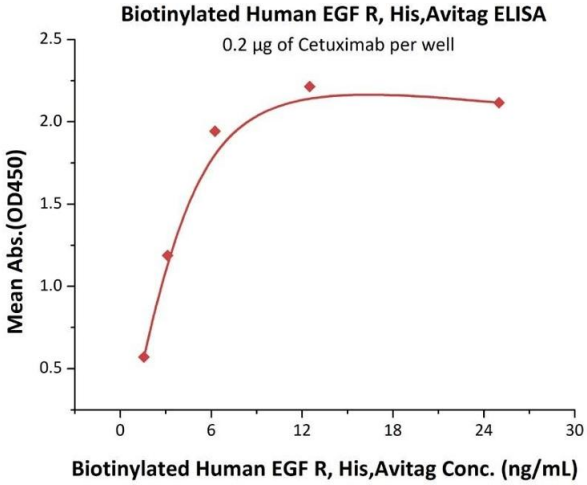
ELISA

Image 1. Immobilized Human EGF, Tag Free at 10 µg/mL (100 µL/well) can bind Biotinylated Human EGF R, His,Avitag (ABIN5674594,ABIN6253697) with a linear range of 0.156-5 µg/mL (Routinely tested).



SDS-PAGE

Image 2. Biotinylated Human EGF R, His,Avitag on under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90 % .



ELISA

Image 3. Immobilized Cetuximab at 2 µg/mL (100 µL/well) can bind Biotinylated Human EGF R, His,Avitag (ABIN5674594,ABIN6253697) with a linear range of 2-6 ng/mL (QC tested).

