

## EGFR Protein, Human, Recombinant (His), AF488-Labeled

## General Information

Synonyms:	PIG61;mENA;ERBB;ERRP;NISBD2;ERBB1;HER1
Protein Construction:	A DNA sequence encoding the Human EGFR (NP_005219.2) (Met1-Ser645) was expressed with a polyhistidine tag at the C-terminus. The protein is site-specifically labeled with AF 488 (Excitation Max. = 495 nm, Emission Max. = 519 nm).
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P00533
Molecular Weight:	72 kDa (predicted)

## QC Testing

Biological Activity:	<ol style="list-style-type: none"><li>1. Immobilized EGF Protein, Human, Recombinant (hFc) (Cat#TMPY-01062) at 2 µg/mL (100 µl/well) can bind EGFR Protein, Human, Recombinant (His), AF488-Labeled (Cat#TMPY-06990), the EC50 is 100-300 ng/mL.&lt;br&gt;</li><li>2. Flow cytometric analysis of anti-EGFR CAR expression. 293 cells were lentivirally transduced with anti-EGFR CAR. Flow cytometric analysis was performed with a negative control protein and EGFR Protein, Human, Recombinant (His), AF488-Labeled (Cat#TMPY-06990), respectively. Non-transduced 293 cells were used as a control (left).&lt;br&gt;</li><li>3. Binding activity of AF 488-conjugated EGFR protein to PBMC cells. PBMC cells were stained with anti-CD3 antibody and EGFR Protein, Human, Recombinant (His), AF488-Labeled (Cat#TMPY-06990) and detected by flow cytometry. PBMC cells stained with anti-CD3 antibody were used as a control (left).</li></ol>
Purity:	≥ 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	This product is Lyophilized from sterile PBS, pH 7.4. Please contact us for any concerns or special requirements. Please refer to the specific buffer information in the hardcopy of datasheet or the lot-specific COA.

## Preparation and Storage

## Reconstitution:

Please refer to the lot-specific COA.

## Stability &amp; Storage:

Twelve months from date of receipt at -20°C to -70°C in lyophilized form and 3 months at -70°C under sterile conditions after reconstitution. Protect from prolonged exposure to light and avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

## Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

As a member of the epidermal growth factor receptor (EGFR) family, EGFR protein is type I transmembrane glycoprotein that binds a subset of EGF family ligands including EGF, amphiregulin, TGF- $\alpha$ , betacellulin, etc. EGFR protein plays a crucial role in signaling pathway in the regulation of cell proliferation, survival and differentiation. Binding of a ligand induces EGFR protein homo- or heterodimerization, the subsequent tyrosine autophosphorylation and initiates various down stream pathways (MAPK, PI3K/PKB and STAT). In addition, EGFR signaling also has been shown to exert action on carcinogenesis and disease progression, and thus EGFR protein is proposed as a target for cancer therapy currently. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

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