

## EGFR Protein, Canine, Recombinant (His)

### General Information

Synonyms:	epidermal growth factor receptor
Protein Construction:	A DNA sequence encoding the canine EGFR (XP_533073.3) (Met1-Ser618) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Met
Species:	Canine
Expression Host:	Baculovirus Insect Cells
Accession:	XP_533073.3
Molecular Weight:	69.8 kDa (predicted); 87.2 kDa (reducing conditions)

### QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized canine EGFR-His at 10 µg/ml (100 µl/well) can bind biotinylated canine His-EGF, The EC50 of biotinylated canine His-EGF is 0.16-0.36µg/ml
Purity:	≥ 90 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 7.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

*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-α, 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

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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

### Reference

Schlessinger, J. (2000) Cell signaling by receptor tyrosine kinases. *Cell* 103(2): 211-25.

Giaccone, G. (2005) HER1/EGFR-targeted agents: predicting the future for patients with unpredictable outcomes to therapy. *Ann. Oncol.* 16(4): 538-48.

Yarden, Y., et al. (2001) Untangling the ErbB signalling network. *Nat. Rev. Mol. Cell. Biol.* 2(2): 127-37.

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