



## RayBiotech, Inc.

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### Certificate of Analysis and Data Sheet

## Recombinant Human Epidermal Growth Factor Receptor (EGFR) / ErbB1, Baculovirus / Sf9-expressed

#### Catalog No.

228-10367

#### Source

*Sf9 Insect Cells*

### Synonyms

Epidermal growth factor receptor, EC 2.7.10.1, Receptor tyrosine-protein kinase ErbB-1, ERBB, mENA, ERBB1, EGFR.

### Introduction

The epidermal growth factor receptor (EGF R) subfamily of receptor tyrosine kinases comprises four members: EGF R (also known as HER1, ErbB1 or ErbB), ErbB2 (Neu, HER-2), ErbB3 (HER-3), and ErbB4 (HER-4). All family members are type I transmembrane glycoprotein that has an extracellular domain which contains two cysteine-rich domains separated by a spacer region that is involved in ligand-binding, and a cytoplasmic domain which has a membrane-proximal tyrosine kinase domain and a C-terminal tail with multiple tyrosine autophosphorylation sites. The human EGF R gene encodes a 1210 amino acid (aa) residue precursor with a 24 aa putative signal peptide, a 621 aa extracellular domain, a 23 aa transmembrane domain, and a 542 aa cytoplasmic domain. EGF R has been shown to bind a subset of the EGF family ligands, including EGF, amphiregulin, TGF- $\beta$ , betacellulin, epiregulin, heparin-binding EGF and neuregulin-2 in the absence of a co-receptor. Ligand binding induces EGF R homodimerization as well as heterodimerization with ErbB2, resulting in kinase activation, tyrosine phosphorylation and cell signaling. EGF R can also be recruited to form heterodimers with the ligand-activated ErbB3 or ErbB4. EGF R signaling has been shown to regulate multiple biological functions including cell proliferation, differentiation, motility and apoptosis. In addition, EGF R signaling has also been shown to play a role in carcinogenesis.

### Description

The EGFR contains the extracellular domain of the human EGFR (25-647 a.a.) excluding the signal peptide which is cleaved by the insect cells having an approximate Mw of 80kDa. The EGFR is fused to a C-terminal Strep-tag and purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### **Formulation**

ErbB1 was lyophilized from a concentrated (1mg/ml) sterile solution containing 1x PBS pH-7.4.

### **Solubility**

It is recommended to reconstitute the lyophilized EGFR in sterile PBS not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

### **Purity**

Greater than 90.0% as determined by SDS-PAGE.

### **Stability**

Lyophilized EGFR although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution EGFR should be stored at 4°C between 2-7 days and for future use below -18°C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

### **Amino acid sequence**

LEEKKV CQGTSNKL TQ LGTFEDHFLS LQRMFNNCEV VLG NLEITYV  
QRNYDLSFLK TIQEVAGYVL IALNTVERIP LENLQIIRGN MYYENSYALA  
VLSNYDANKT GLKELPMRNL QEILHGAVRF SNNPALCNVE SIQWRDIVSS  
DFLSNMSMDF QNHLGSCQKC DPSCPNGSCW GAGEENCQKL TKIICAQQCS  
GRCRGKSPSD CCHNQCAAGC TGPRES DCLV CRKFRDEATC KDTCPPLMLY  
NPTTYQMDVN PEGKYSFGAT CVKKCPRNYV VTDHGSCVRA CGADSYEMEE  
DGVRKCKKCE GPCRKVCNGI GIGEFKDSL S INATNIKHFK NCT SISGDLH  
ILPVAFRGDS FTHTPPLDPQ ELDILKTVKE ITGFLLIQAW PENRTDLHAF  
ENLEIIRGRT KQH GQFSLAV VSLNITSLGL RSLKEISDGD VIISGNKNLC  
YANTINWKKL FGTSGQKTKI ISNRGENSCK ATGQVCHALC SPEGCWGPEP  
RDCVSCRNV S RGRECV DKCK LLEGEPREFV ENSECIQCHP ECLPQAMNIT  
CTGRGPDNCI QCAHYIDGPH CVKTC PAGVM GENNTLVWKY ADAGHVCHLC  
HPNCTYGCTG PGLEG CPTNG PKIPSIA + Strep-tag.

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