Recombinant Human EGFR Fc Chimera  
Catalog Number: 344-ER

**DESCRIPTION**

**Source**  
Mouse myeloma cell line, NS0-derived

<table>
<thead>
<tr>
<th>Human EGFR (Met1-Ser645)</th>
<th>IEGRMD</th>
<th>Human IgG1-Fc (Pro100-Lys330)</th>
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<tbody>
<tr>
<td>Accession # CAA25240</td>
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**N-terminal Sequence Analysis**  
Leu25

**Structure / Form**  
Disulfide-linked homodimer

**Predicted Molecular Mass**  
95.1 kDa (monomer)

**SPECIFICATIONS**

**SDS-PAGE**  
125-145 kDa, reducing conditions

**Activity**  
Measured by its ability to bind recombinant human EGF in a functional ELISA with an estimated $K_d$ <8 nM.

**Endotoxin Level**  
<1.0 EU per 1 μg of the protein by the LAL method.

**Purity**  
>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution**  
Reconstitute at 100 μg/mL in sterile PBS.

**Shipping**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage**  
- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

The EGFR subfamily of receptor tyrosine kinases comprises four members: EGFR (also known as HER-1, ErbB1, or ErbB), ErbB2 (Neu, HER-2), ErbB3 (HER-3), and ErbB4 (HER-4). All family members are type I transmembrane glycoproteins with an extracellular ligand binding domain containing two cysteine-rich domains separated by a spacer region and a cytoplasmic domain containing a membrane-proximal tyrosine kinase domain followed by multiple tyrosine autophosphorylation sites (1, 2). The human EGFR cDNA encodes a 1210 amino acid (aa) precursor with a 24 aa signal peptide, a 621 aa extracellular domain (ECD), a 23 aa transmembrane segment, and a 542 aa cytoplasmic domain (3, 4). Soluble receptors consisting of the extracellular ligand binding domain are generated by alternate splicing in human and mouse (5-7). Within the ECD, human EGFR shares 88% aa sequence identity with mouse and rat EGFR. It shares 43%-44% aa sequence identity with the ECD of human ErbB2, ErbB3, and ErbB4. EGFR binds a subset of the EGF family ligands, including EGF, amphiregulin, TGF-α, betacellulin, epiregulin, HB-EGF, and epigen (1, 2). Ligand binding induces EGFR homodimerization as well as heterodimerization with ErbB2, resulting in kinase activation, heterodimerization tyrosine phosphorylation and cell signaling (8-12). EGFR can also be recruited to form heterodimers with the ligand-activated ErbB3 or ErbB4. EGFR signaling regulates multiple biological functions including cell proliferation, differentiation, motility, and apoptosis (13, 14). EGFR is overexpressed in a wide variety of tumors and is the target of several anti-cancer drugs (15).

**References:**