

## **Synonym**

EGF, URG, HOMG4

### Source

Human EGF, Mouse IgG2a Fc Tag(EGF-H525b) is expressed from human 293 cells (HEK293). It contains AA Asn 971 - Arg 1023 (Accession # P01133-1). Predicted N-terminus: Glu

## **Molecular Characterization**

mFc(Glu 98 - Lys 330) EGF(Asn 971 - Arg 1023) P01863 P01133-1

This protein carries a mouse IgG2a Fc tag at the N-terminus.

The protein has a calculated MW of 33.1 kDa. The protein migrates as 35 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

### **Endotoxin**

Less than 0.1 EU per µg by the LAL method.

## **Purity**

>95% as determined by SDS-PAGE.

#### **Formulation**

Lyophilized from 0.22 µm filtered solution in

Tris with Glycine, Arginine and NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

#### Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

### Storage

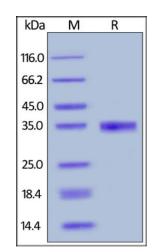
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

# **SDS-PAGE**

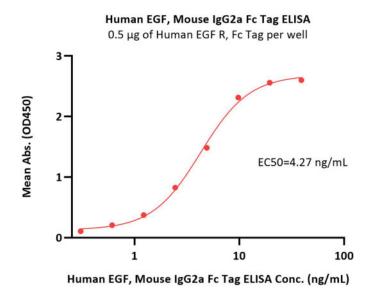


Human EGF, Mouse IgG2a Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

## **Bioactivity-ELISA**

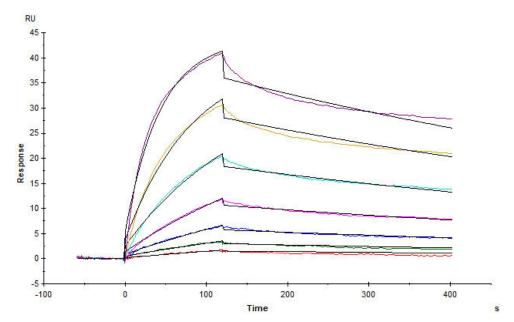




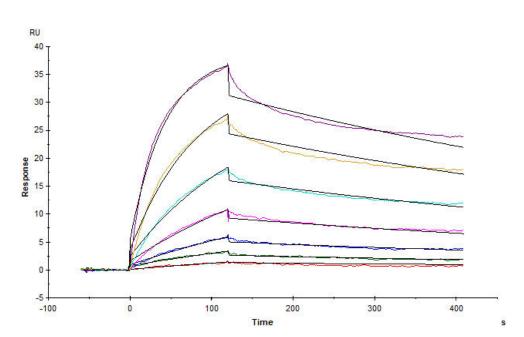


Immobilized Human EGF R, Fc Tag (Cat. No. EGR-H5252) at 5  $\mu$ g/mL (100  $\mu$ L/well)can bind Human EGF, Mouse IgG2a Fc Tag (Cat. No. EGF-H525b) with a linear range of 0.3-10 ng/mL (QC tested).

## **Bioactivity-SPR**



Human EGF R, His Tag (Cat. No. EGR-H5222) captured on CM5 Chip via anti-His antibody can bind Human EGF, Mouse IgG2a Fc Tag (Cat. No. EGF-H525b) with an affinity constant of 2.63 nM as determined in SPR assay (Biacore T200) (Routinely tested).



Human EGF R, His Tag, low endotoxin (Cat. No. EGR-H522a) captured on CM5 Chip via anti-His antibody can bind Human EGF, Mouse IgG2a Fc Tag (Cat. No. EGF-H525b) with an affinity constant of 2.76 nM as determined in SPR assay (Biacore T200) (Routinely tested).

# Background

Human epidermal growth factor (EGF) is also known as HOMG4 and URG, and is a growth factor that plays an important role in the regulation of cell growth, proliferation, and differentiation by binding to its receptor EGFR. Epidermal growth factor can be found in human platelets, macrophages, urine, saliva, milk, and plasma. EGF is the founding member of the EGF-family of proteins. Members of this protein family have highly similar structural and functional characteristics. All family members contain one or more repeats of the conserved amino acid sequence. The biological effects of salivary EGF include healing of oral and gastroesophageal ulcers, inhibition of gastric acid secretion, stimulation of DNA synthesis as well as mucosal protection from intraluminal injurious factors such as gastric acid, bile acids, pepsin, and trypsin and to physical, chemical and bacterial agents. Because of the increased risk of cancer by EGF, inhibiting it decreases cancer risk.

## **Clinical and Translational Updates**

Please contact us via <u>TechSupport@acrobiosystems.com</u> if you have any question on this product.

