

# Epidermal Growth Factor (Human EGF)

✓ 100 µl  
(10 µg)

**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com

**Support** ■ 877-678-TECH (8324)  
info@cellsignal.com

**Web** ■ www.cellsignal.com

rev. 09/25/06

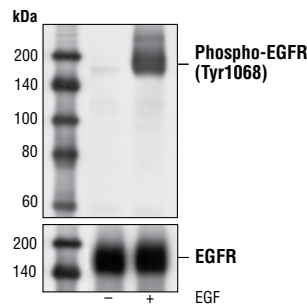
This product is for *in vitro* research use only and is not intended for use in humans or animals.

Molecular Wt.	Source	Purity
6 kDa	Human Recombinant Protein	>98%

**Background:** Epidermal growth factor (EGF) is a small polypeptide hormone that has mitogenic properties *in vivo* and *in vitro* and effects the growth and/or differentiation of many cell types. EGF elicits biologic responses by binding to its cell surface receptor, which is a transmembrane glycoprotein containing a cytoplasmic protein tyrosine kinase (1,2). The binding of EGF to EGF receptor induces dimerization of the receptor, autophosphorylation and activation of downstream signaling components (3). The integrated biological responses to EGF signaling are pleiotropic, including mitogenesis or apoptosis, enhanced cell motility, protein secretion, and differentiation or dedifferentiation. In addition to being implicated in organ morphogenesis, maintenance and repair, upregulated EGF receptor signaling has been correlated with progression to invasion and metastasis in a wide variety of tumors. Thus, EGF receptor and its downstream signaling molecules are targets for therapeutic interventions in wound repair and cancer (4–6).

**Description:** The human EGF coding cDNA was obtained from human periodontal tissue mRNA, subcloned into a prokaryotic expression vector and expressed in *E. coli*. Epidermal Growth Factor (Human EGF) was purified and stored in PBS buffer containing 0.1% BSA.

**Concentration and Specific Activity:** 100 µg/ml; 1 x 10<sup>6</sup> IU/mg



Western blot analysis of extracts from A431 cells, untreated or EGF-stimulated (100 ng/ml for 2 minutes), using Phospho-EGF Receptor (Tyr1068) Antibody #2234 (upper) or EGF Receptor Antibody #2232 (lower).

#### Background References:

- (1) Wells, A. (1999) *Int. J. Biochem. Cell. Biol.* 31, 637–643.
- (2) Boulougouris, P. and Elder, J. (2001) *Anticancer Res.* 21, 2769–2775.
- (3) Schlessinger, J. (2002) *Cell* 110, 669–672.
- (4) Sarries, C. et al. (2002) *Pharmacogenomics* 3, 763–780.
- (5) Lorimer, I.A. (2002) *Curr. Cancer Drug Targets* 2, 91–102.
- (6) Ghaneh, P. et al. (2002) *J. Hepatobiliary Pancreat. Surg.* 9, 1–11.

**Storage:** Human EGF is supplied as a solution. It should be stored at -80°C. Aliquot the reagent upon receipt and avoid repeat freeze-thaw cycles. CST recommends using 50–100 ng/ml of Human EGF for stimulation of Human EGF signaling.

#### Companion Products:

Phospho-EGF Receptor (Tyr845) Blocking Peptide #1100  
Phospho-EGF Receptor (Tyr1068) Blocking Peptide #1110  
Phospho-EGF Receptor (Tyr845) Antibody #2231  
EGF Receptor Antibody #2232  
Phospho-EGF Receptor (Tyr1068) Antibody #2234  
Phospho-EGF Receptor (Tyr992) Antibody #2235  
Phospho-EGF Receptor (Tyr1068) (1H12) Mouse mAb #2236  
Phospho-EGF Receptor (Tyr1045) Antibody #2237  
Phospho-EGF Receptor Antibody Sampler Kit #9922