Datasheet for ABIN1589620

# EGF Protein (Monomer)

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## Overview

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| Quantity: | 100 µg |
| Target: | EGF |
| Protein Characteristics: | Monomer |
| Origin: | Human |
| Source: | Escherichia coli (E. coli) |
| Protein Type: | Recombinant |
| Biological Activity: | Active |

## Product Details

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| Purpose: | EGF |
| Sequence: | MNSDSECPLS HDGYCLHDGV CMYIEALDKY ACNCVVGYIG ERCQYRDLKW WELR |
| Specificity: | Chromosomal location:4q25 |
| Cross-Reactivity: | Mouse |
| Characteristics: | Length (aa):54 |
| Purity: | > 95 % by SDS-PAGE |
| Endotoxin Level: | < 0.1 ng/µg of protein (<1EU/µg) |

## Target Details

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| Target: | EGF |
| Alternative Name: | EGF (EGF Products) |

## Target Details

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| Background: | Epidermal growth factor (EGF) is the founding member of the EGF family that also includes TGFα, amphiregulin (AR), betacellulin (BTC), epiregulin (EPR), heparin-binding EGF-like growth factor (HBEGF), epigen, and the neuregulins (NRG) 1 through 6. Members of the EGF family share a structural motif, the EGF-like domain, which is characterized by three intra-molecular disulfide bonds that are formed by six similarly spaced conserved cysteine residues. All EGF family members are synthesized as type I transmembrane precursor proteins that may contain several EGF domains in the extracellular region. The mature proteins are released from the cell surface by regulated proteolysis. The 1207 amino acid (aa) human EGF precursor contains nine EGF domains and nine LDLR class B repeats. The mature protein consists of 53 aa and is generated by proteolytic excision of the EGF domain proximal to the transmembrane region. Mature human EGF shares 70 % aa sequence identity with mature mouse and rat EGF. EGF is present in various body fluids, including blood, milk, urine, saliva, seminal fluid, pancreatic juice, cerebrospinal fluid, and amniotic fluid. Four ErbB (HER) family receptor tyrosine kinases including EGFR/ErbB1, ErbB2, ErbB3 and ErbB4, mediate responses to EGF family members. EGF binds ErbB1 and depending on the context, induces the formation of homodimers or heterodimers containing ErbB2. Biological activities ascribed to EGF include epithelial development, angiogenesis, inhibition of gastric acid secretion, fibroblast proliferation, and colony formation of epidermal cells in culture.<br>Synonyms: EGF, URG, HOMG4, Urogastrone, Epidermal growth factor |
| Molecular Weight: | 6.35 kDa |
| Gene ID: | 1950 |
| NCBI Accession: | NM_1963, NP_001954 |
| UniProt: | P01133 |
| Pathways: | NF-kappaB Signaling, RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Regulation of Carbohydrate Metabolic Process, Hepatitis C, Protein targeting to Nucleus, Interaction of EGFR with phospholipase C-gamma, Thromboxane A2 Receptor Signaling, EGFR Downregulation |

## Application Details

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| Application Notes: | The biological activity was determined by the ability to induce EGF receptor phosphorylation in the A431 tumor cell line [Soler et al, J Chromatography B, 788, 2003] and the induction of proliferation in NHDF cells (Normal Human Dermal Fibroblasts). |
| Comment: | Cytokines & Growth Factors |

## Application Details

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| Restrictions: | For Research Use only |

## Handling

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| Format: | Lyophilized |
| Reconstitution: | We recommend a quick spin followed by reconstitution in water to a concentration of 0.1-1.0 mg/mL. |
| Buffer: | PBS |
| Handling Advice: | Centrifuge vial prior to opening. |
| Storage: | RT,-20 °C |
| Storage Comment: | The lyophilized protein is stable for a few weeks at room temperature, but best stored at -20°C. Reconstituted EGF should be stored in working aliquots at -20°C. |

 