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| Data Sheet | | |
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| Product Information | | |
| **Product Name** | **:** | **Recombinant Human Epidermal Growth Factor (rhEGF)** |
| **Synonyms** | **:** | Pro-epidermal growth factor, Urogastrone |
| **Description** | **:** | Epidermal growth factor (EGF) is a [growth factor](http://en.wikipedia.org/wiki/Growth_factor) that stimulates [cell growth](http://en.wikipedia.org/wiki/Cell_growth), [proliferation](http://en.wikipedia.org/wiki/Cell_growth), and [differentiation](http://en.wikipedia.org/wiki/Cellular_differentiation). Human EGF is a 6045 [Da](http://en.wikipedia.org/wiki/Dalton_(unit)) [protein](http://en.wikipedia.org/wiki/Protein) with 53 [amino acid residues](http://en.wikipedia.org/wiki/Amino_acid) and three intramolecular [disulfide bonds](http://en.wikipedia.org/wiki/Disulfide_bond). EGF acts by binding with high [affinity](http://en.wikipedia.org/wiki/Affinity_(pharmacology)) to EGFR on the [cell surface](http://en.wikipedia.org/wiki/Plasma_membrane). This stimulates ligand-induced dimerization, activating the intrinsic protein-tyrosine kinase activity of the receptor. The [tyrosine kinase](http://en.wikipedia.org/wiki/Tyrosine_kinase) activity, in turn, initiates a [signal transduction](http://en.wikipedia.org/wiki/Signal_transduction) cascade that results in a variety of [biochemical](http://en.wikipedia.org/wiki/Biochemistry) changes within the cell - a rise in intracellular [calcium](http://en.wikipedia.org/wiki/Calcium) levels, increased [glycolysis](http://en.wikipedia.org/wiki/Glycolysis) and [protein synthesis](http://en.wikipedia.org/wiki/Protein_synthesis), and increases in the [expression](http://en.wikipedia.org/wiki/Gene_expression) of certain [genes](http://en.wikipedia.org/wiki/Gene). (Ref. From Wikipedia) |
| **NCBI Accession No.** | **:** | NM\_001963.4 |
| **Amino acid sequence** | **:** | **MNSDSECPLSHDGYCLHDGVCMYIEALDKYACNCVVGYIGERCQYRDLKWWELR** |
| **Molecular Mass** | **:** | 6.33 kDa (54 aa) |
| **Protein Tags** | **:** | No tagging |
| **Source** | **:** | *E. coli.* |
| **Cat. No.** | **:** | JW-H010-0050, JW-H010-0100, JW-H010-0250, JW-H010-0500, JW-H010-1000 |
| **Storage** | **:** | Should be at ≤ -70 ℃ as undiluted aliquots of handy size. Avoid repeated freezing and thawing. |
| **Cross Reactivity** | **:** | Mouse, Rat, Monkey, Rabbit, Pig, Cow, Hamster |

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| Quality Control | | | | | | |
| **Test items** |  | | | **Specifications** | | |
| **Appearance** | | | **:** | | Clear, colorless liquid | |
| **Purity** | | | **:** | | Greater than 95 % by SDS-PAGE | |
| **Specificity** | | | **:** | | Using Western blot, detection |  |
| **Concentration** | | | **:** | | 0.1 mg/㎖, Bradford method |
| **Biological Activity** | | | **:** | | Determined by proliferation of MCF10A indicator cells.  The ED50 is <100 pg/ml, corresponding to a specific activity of > 1.0 × 107 U/mg |
| **Endotoxin** | | | **:** | | Less than 0.5 EU/㎍ as determined by the LAL method | |
| **Formulation** | | | : | | PBS (pH 7.4) without preservative or carrier proteins. | |
| **Stability** | | | **:** | | Stable for up to 12 months at -70 ℃. Stable for a month at 4 ℃. | |
| **Sterility** | | | **:** | | Sterilized through a 0.2 ㎛ membrane filter and packaged aseptically. Culture for 2 weeks, no growth | |
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