

Overview

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| Synonyms | Epiregulin (EREG), Human; |
| Description | Epiregulin is a member of the EGF family of growth factors which includes, among others, epidermal growth factor (EGF), transforming growth factor (TGF)-alpha, amphiregulin (ARG), HB (heparin-binding)-EGF, betacellulin, and the various heregulins. It is expressed mainly in the placenta and peripheral blood leukocytes and in certain carcinomas of the bladder, lung, kidney and colon. Epiregulin stimulates the proliferation of keratinocytes, hepatocytes, fibroblasts and vascular smooth muscle cells. It also inhibits the growth of several tumor-derived epithelial cell lines. Human Epiregulin is initially synthesized as a glycosylated 19.0 kDa transmembrane precursor protein, which is processed by proteolytic cleavage to produce a 6.0 kDa mature secreted sequence. |
| Species | Human |
| Source | <i>E. coli</i> |
| Biological Activity | Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using murine Balb/c 3T3 cells is less than 2 ng/ml, corresponding to a specific activity of > 5.0 × 10 ⁵ IU/mg. |
| Sequence | VAQVSITKCS SDMNGYCLHG QCIYLVMSQ NYCRCVGYT GVRCEHFFL |

Properties

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| Measured Molecular Weight | Approximately 5.6 kDa, a single non-glycosylated polypeptide chain containing 49 amino acids. |
| Purity | > 97 % by SDS-PAGE and HPLC analyses. |
| Formulation | Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4. |
| Reconstitution | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at d -20 °C. Further dilutions should be made in appropriate buffered solutions. |
| Endotoxin Level | Less than 1 EU/µg of rHuEpiregulin as determined by LAL method. |
| Physical Appearance | Sterile Filtered White lyophilized (freeze-dried) powder. |
| Usage | This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. |
| Storage | This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles. |

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