

Datasheet for 009-001-C26**EGF Human Recombinant Epidermal Growth Factor****Overview**

Description:	EGF Human Recombinant Epidermal Growth Factor - 009-001-C26
Item No.:	009-001-C26
Size:	500 µg
Applications:	Cellular Assay
Origin:	Human
Expressed in:	E. coli

Product Details

Background: EGF (Epidermal Growth Factor) protein, of the superfamily with the same name, is synthesized as a large precursor molecule that is proteolytically cleaved to generate the 53-amino acid epidermal growth factor peptide. This protein acts a potent mitogenic factor that plays an important role in the growth, proliferation and differentiation of numerous cell types. It is a magnesiotropic hormone that stimulates magnesium reabsorption in the renal distal convoluted tubule via engagement of EGFR and activation of the magnesium channel TRPM6. This protein acts by binding the high affinity cell surface receptor, epidermal growth factor receptor. Defects in this gene are the cause of hypomagnesemia type 4 (HOMG4). Dysregulation of this gene has been associated with the growth and progression of certain cancers. Alternate splicing results in multiple transcript variants. This protein exists in the membrane as a single-pass type I membrane protein, and contains 9 EGF-like domains as well as 9 LDL-receptor class B repeats. It is significantly expressed in kidney, salivary gland, cerebrum and prostate.

Synonyms:	Epidermal growth factor, Urogastrone
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	EGF
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Purity/Specificity: Purity was determined to be greater than 95% as determined by analysis by RP-HPLC and by reducing and non-reducing SDS-PAGE, against known standard.

Relevant Links:

- [009-001-C26 SDS](#)
- [UniProtKB - P01133](#)

Application Details

Suggested Applications: Cellular Assay (Based on references)

Application Note: EGF Recombinant Protein is suitable as a control for polyclonal or monoclonal anti-EGF in immunological assays.

Assay Dilutions: All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

Other: Recombinant Human Epidermal Growth Factor is fully biologically active when compared to standards. The ED50, calculated by the dose-dependent proliferation of murine BALB/c 3T3 cells, is 30-40 pg/ml.

Endotoxin level as measured by LAL is 0.5EU/μg protein.

Formulation

Physical State: Lyophilized

Concentration: 0.1 mg/mL by UV absorbance at 280 nm

Buffer: 0.1% Trifluoroacetic acid

Preservative: None

Stabilizer: None

Reconstitution Volume: 5.0 mL

Reconstitution Buffer: Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition: Wet Ice

Storage Condition: Store vial at -20° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL) . For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.

Expiration: Expiration date is six (6) months from date of receipt.

References

- Khan SA et al. Probing the signaling requirements for naive human pluripotency by high-throughput chemical screening. *Cell Rep.* (2021)
- Dong C et al. Derivation of trophoblast stem cells from naïve human pluripotent stem cells *eLife.* (2020)

Disclaimer

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