Datasheet for ABIN2666804

Epiregulin Protein (EREG) (AA 63-108)

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Overview

Quantity:	25 µg
Target:	Epiregulin (EREG)
Protein Characteristics:	AA 63-108
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg cytokine as determined by the LAL method.

Target Details

Target:	Epiregulin (EREG)
Alternative Name:	Epiregulin (EREG Products)
Background:	Epiregulin was initially identified as a growth-inhibitory factor from the conditioned medium of the murine tumor cell line NIH3T3/clone T7. It belongs to the EGF family of proteins that includes EGF, TGF-α, heparin-binding EGF like-growth factor (HB-EGF), epigen, epiregulin, betacellulin, neuroregulin, and tomoregulin. It posesses 24-50 % amino acid sequence identity

Target Details

	with sequences of other EGF-related growth factors. All the EGF family members are synthesized as type I membrane protein precursors, which can undergo proteolytic cleavage at the plasma membrane to release a mature soluble ectodomain. Epiregulin acts as an autocrine growth factor in human epidermal keratinocytes and it can be induced by HB-EGF, amphiregulin, and TGF-α. Epiregulin is expressed by, and plays a key role in, immune-related responses of keratinocytes and tissue resident macrophages. It has been shown that epiregulin-deficient (EP-/-) mice develop chronic dermatitis. Also, epiregulin is involved in proinflammatory cytokine production in bone marrow-derived macrophages. In addition, epiregulin induces proliferation of human corneal epithelial cells and its expression can be induced in these cells by TGF-α, HB-EGF, AR, and EGF. Epiregulin plays a role in the development of hyperkeratosis during the pathogenesis of middle ear cholesteatoma, and it is overexpressed in psoriatic epidermis. Epiregulin polymorphisms seem to be associated with susceptibility to different clinical phenotypes of TB, and epiregulin modulates the innate immune responses of TB.
Molecular Weight:	The 47 amino acid recombinant protein has a predicted molecular mass of approximately 5.4 kDa. The DTT-reduced and non-reduced protein migrate at approximately 6 kDa and 8 kDa, respectively, by SDS-PAGE. The predicted N-terminal amino acid is Met.
Pathways:	RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Regulation of Muscle Cell Differentiation

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: ED50 = 0.5 - 3.0 ng/ml, corresponding to a specific activity of 0.33 - 2.0 x 106 units/mg, as determined by induction of BALB/3T3 cell proliferation.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 µg/mL in sterile buffer (PBS, HPBS, DPBS, and EBSS) containing carrier protein such as 1 % BSA or HSA. After dilution, the cytokine can be stored between 2 °C and 8 °C for one month or from -20 °C to -70 °C for up to 3 months.
Buffer:	0.22 µm filtered protein solution is in PBS, pH 7.2.

Handling

Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Unopened vial can be stored between 2°C and 8°C for three months, at -20°C for six months, or at -70°C for one year.