Datasheet for ABIN2666768

Amphiregulin Protein (AREG) (AA 94-191)

1 Image

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Overview

Quantity:	10 µg
Target:	Amphiregulin (AREG)
Protein Characteristics:	AA 94-191
Origin:	Mouse
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

Target Details

Target:	Amphiregulin (AREG)
Alternative Name:	Amphiregulin (AREG Products)
Background:	Amphiregulin was initially identified in the conditioned medium of human mammary gland MCF-7 cells treated with TPA. The mouse gene was cloned from the androgen-dependent SC2G cell line derived from Shionogi mouse mammary carcinoma SC115. It belongs to the EGF family of proteins that includes EGF, TGF-α, heparin-binding EGF like-growth factor (HB-EGF), epigen, epiregulin, and betacellulin. Mouse amphiregulin is derived from a 248 amino acid

Target Details

	transmembrane precursor, and it has 66 % identity to the human protein. 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. ADAM17 (TACE) has an important role in ectodomain shedding of amphiregulin, TNF-α, and HB-EGF. This cleavage is a key step in the control of ligand availability and receptor activation, and it is stimulated by physiological and pharmacological agonists, including TPA, calcium ionophores, GPCR ligands, cytokines, and growth factors. Amphiregulin is a paracrine regulator of estrogen action during ductal morphogenesis (mammary gland development), and it has been associated with breast cancer initiation and progression. Amphiregulin is elevated in psoriatic lesional skin, gastrointestinal carcinomas, colorectal cancer, and hepatocelular carcinoma tissues. In addition, FOXP3+ Tregs express EGFR under inflammatory conditions, and amphiregulin enhances regulatory T cell-suppressive function in vitro and in vivo in a colitis and tumor vaccination model.
Molecular Weight:	The 98 amino acid recombinant protein has a predicted molecular mass of approximately 11.3 kDa. The DTT-reduced and non-reduced protein migrate at approximately 16 kDa and by SDS-PAGE. The N-terminal amino acid is Ser.
Pathways:	RTK Signaling, EGFR Signaling Pathway

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: ED50 = 0.04 - 0.2 µg/ml, corresponding to a specific activity of 0.5 - 2.5 x 104 units/mg, as determined by induction of BALB/3T3 cell proliferation.
Restrictions:	For Research Use only

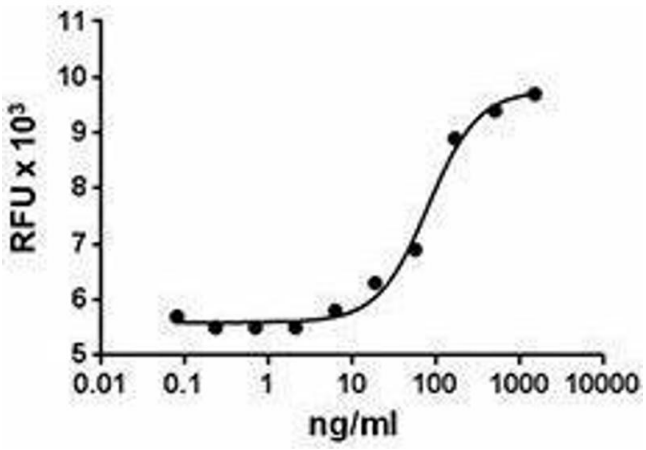
Handling

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 Advice:	Avoid repeated freeze/thaw cycles.

Handling

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.

Images



ELISA

Image 1.