Human Betacellulin/BTC Antibody

Polyclonal Goat IgG
Catalog Number: AB-261-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Betacellulin/BTC in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	*E. coli*-derived recombinant human Betacellulin/BTC Asp32-Tyr111 Accession # P35070
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

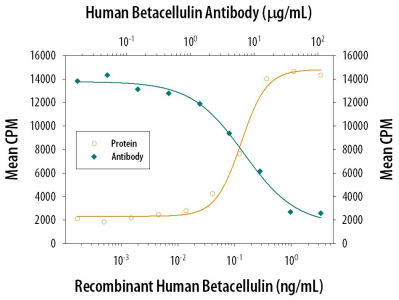
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human Betacellulin/BTC (Catalog # 261-CE)
Neutralization	Measured by its ability to neutralize Betacellulin/BTC-induced proliferation in the Balb/3T3 mouse embryonic fibroblast cell line. The Neutralization Dose (ND_{50}) is typically 4-8 µg/mL in the presence of 1 ng/mL Recombinant Human Betacellulin/BTC.	

DATA

Neutralization



Cell Proliferation Induced by Betacellulin/BTC and Neutralization by Human Betacellulin/BTC Antibody. Recombinant Human Betacellulin/BTC (Catalog # 261-CE) stimulates proliferation in the Balb/3T3 mouse embryonic fibroblast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human Betacellulin/BTC (1 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human Betacellulin/BTC Polyclonal Antibody (Catalog # AB-261-NA). The ND_{50} is typically 4-8 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Betacellulin (BTC) is a new member of the EGF family of cytokines that is comprised of at least ten proteins including EGF, TGF-α, amphiregulin, HB-EGF, and the various heregulins. All of these cytokines are synthesized as transmembrane precursors and are characterized by the presence of one or more EGF structural units in their extracellular domain. The soluble forms of these cytokines are released by proteolytic cleavage. BTC, a heparin-binding protein, was originally isolated from the conditioned media of mouse pancreatic beta tumor cells as a 32 kDa glycoprotein composed of 80 amino acid residues. The cDNA encoding human BTC was cloned from a human breast adenocarcinoma cell line (MCF-7) cDNA library. Human and mouse cDNAs encode BTC precursor proteins of 178 and 177 amino acid residues, respectively. At the amino acid sequence level, human BTC precursor protein exhibits 79% identity with that of the mouse BTC precursor. In a mouse cell line transfected with human BTC cDNA, three forms of soluble human BTC have been detected: the glycosylated, intact BTC composed of 80 amino acid residues, a truncated molecule lacking 12 amino acid residues from the amino terminus, and a second truncated molecule lacking 30 amino acid residues from the amino terminus. The biological activities of these BTC forms were shown to be identical. BTC can bind to the EGF receptor and is a potent mitogen for Balb/c 3T3 fibroblasts, retinal pigment epithelial cells and vascular smooth muscle cells.

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