

## BTC (C-16): sc-5800

### BACKGROUND

Betacellulin (BTC), a member of the epidermal growth factor (EGF) family, was originally identified as a growth-promoting factor in the conditioned medium of a mouse pancreatic-cell carcinoma (insulinoma) cell line and has since been identified in humans. BTC is synthesized as a large transmembrane precursor molecule that can be cleaved proteolytically to release the soluble form of BTC or function as membrane-anchored growth factors in juxtacrine signaling. BTC, in addition to stimulating homodimers of ErbB-1 and ErbB-4, is capable of binding and activating all possible combinations of heterodimeric ErbB receptors including the oncogenic ErbB-2/ErbB-3 complex. BTC is also expressed in some human malignancies and may have an important role in tumor growth progression.

### REFERENCES

1. Shing, Y., et al. 1993. Betacellulin: a mitogen from pancreatic  $\beta$  cell tumors. *Science* 259: 1604-1607.
2. Sasada, R., et al. 1993. Cloning and expression of cDNA encoding human betacellulin, a new member of the EGF family. *Biochem. Biophys. Res. Commun.* 190: 1173-1179.
3. Alimandi, M., et al. 1997. Epidermal growth factor and betacellulin mediate signal transduction through co-expressed ErbB-2 and ErbB-3 receptors. *EMBO J.* 16: 5608-5617.
4. Pinkas-Kramarski, R., et al. 1998. The oncogenic ErbB-2/ErbB-3 heterodimer is a surrogate receptor of the epidermal growth factor and betacellulin. *Oncogene* 16: 1249-1258.
5. Dunbar, A.J., et al. 1999. Identification of betacellulin as a major peptide growth factor in milk: purification, characterization and molecular cloning of bovine betacellulin. *Biochem. J.* 344: 713-721.

### CHROMOSOMAL LOCATION

Genetic locus: BTC (human) mapping to 4q13.3.

### SOURCE

BTC (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BTC of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5800 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

BTC (C-16) is recommended for detection of precursor and mature BTC of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BTC (C-16) is also recommended for detection of precursor and mature BTC in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BTC siRNA (h): sc-39414, BTC shRNA Plasmid (h): sc-39414-SH and BTC shRNA (h) Lentiviral Particles: sc-39414-V.

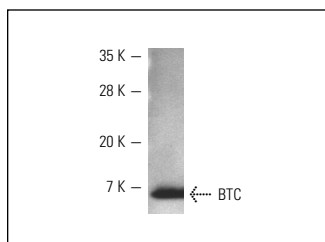
Molecular Weight of BTC: 18-32 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



BTC (C-16): sc-5800. Western blot analysis of human recombinant BTC.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **BTC (E-12): sc-514061**, our highly recommended monoclonal alternative to BTC (C-16).