SANTA CRUZ BIOTECHNOLOGY, INC.

FAP (bN-15): sc-17456

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mycobacterium avium is an intracellular pathogen and a major opportunistic infectious agent observed in patients with acquired immune deficiency syndrome (AIDS). Evidence suggests that the initial portal of infection by *M. avium* is often the gastrointestinal tract. The mechanism by which *M. avium* crosses the epithelial barrier is unclear. A possible mechanism is suggested by the ability of *M. avium* to bind fibronectin, an extracellular matrix protein that is a virulence factor for several extracellular pathogenic bacteria, which bind to mucosal surfaces. Fibronectin (FN) binding is required for attachment and internalization of several mycobacteria by epithelial cells *in vitro*. FAP is located near the interior of the cell envelope of *M. avium* paratuberculosis. Studies indicate that a FAP homologue mediates the attachment of FN to *M. avium* subspecies paratuberculosis. Furthermore, given the subcellular location of FAP, this protein may operate at the terminus of a coordinated FN binding system in the cell envelope of *M. avium* paratuberculosis.

REFERENCES

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2. Zhao, W., Schorey, J.S., Groger, R., Allen, P.M., Brown, E.J., and Ratliff, T.L. 1999. Characterization of the fibronectin binding motif for a unique mycobacterial fibronectin attachment protein, FAP. J. Biol. Chem. 274: 4521-4526.
3. Middleton, A.M., Chadwick, M.V., Nicholson, A.G., Dewar, A., Groger, R.K., Brown, E.J., and Wilson, R. 2000. The role of *Mycobacterium avium* complex fibronectin attachment protein in adherence to the human respiratory mucosa. Mol. Microbiol. 38: 381-391.
4. Zhao, W., Schorey, J.S., Bong-Mastek, M., Ritchey, J., Brown, E.J., and Ratliff, T.L. 2000. Role of a *bacillus* Calmette-Guerin fibronectin attachment protein in BCG-induced antitumor activity. Int. J. Cancer 86: 83-88.
5. Secott, T.E., Lin, T.L., and Wu, C.C. 2001. Fibronectin attachment protein homologue mediates fibronectin binding by *Mycobacterium avium* subsp. paratuberculosis. Infect. Immun. 69: 2075-2082.

SOURCE

FAP (bN-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of FAP of *M. avium* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17456 P, (100 µg 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.

APPLICATIONS

FAP (bN-15) is recommended for detection of FAP of *M. avium* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.