

Staphylococcus aureus (704): sc-58038

BACKGROUND

Staphylococcus aureus is a Gram-positive coccus that frequently lives on the skin or in the nose of humans. This microbe produces β -lactamase, enzymes which break down the β -lactam ring of the penicillin molecule, making it resistant to most penicillin and cephalosporins. *Staphylococcus aureus* causes a broad range of illnesses, from minor skin infections and abscesses to life-threatening diseases such as pneumonia, meningitis, endocarditis, septicemia and Toxic Shock Syndrome (TSS). Toxic Shock Syndrome Toxin-1 (TSST-1) is a staphylococcal secreted exotoxin that is responsible for TSS, since it leads to non-specific binding of MHC II with T cell receptors, resulting in polyclonal T cell activation. TSST-1 also plays a role in the pathogenesis of several autoimmune and allergic diseases associated with B cell hyperactivity, and it produces antagonistic effects on IL-4-induced IgE synthesis. Symptoms of TSS include high fever, accompanied by low blood pressure, malaise and confusion, which can rapidly progress to stupor, coma and multi-organ failure.

REFERENCES

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RESEARCH USE

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

SOURCE

Staphylococcus aureus (704) is a mouse monoclonal antibody raised against UV-inactivated *Staphylococcus aureus* cells.

PRODUCT

Each vial contains 100 μ g IgG₃ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Staphylococcus aureus (704) is recommended for detection of *Staphylococcus aureus*, Protein A-negative *Staphylococcus aureus* and *Staphylococcus epidermidis* by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with *Corynebacteria* species, *Streptococcus* species or *Mycoplasma* species.

SELECT PRODUCT CITATIONS

- Jung, S.Y., You, H.J., Kim, M.J., Ko, G., Lee, S. and Kang, K.S. 2022. Wnt-activating human skin organoid model of atopic dermatitis induced by *Staphylococcus aureus* and its protective effects by *Cutibacterium acnes*. *iScience* 25: 105150.

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 for detailed protocols and support products.