SANTA CRUZ BIOTECHNOLOGY, INC.

FITC (F4/1): sc-65218

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fluorescein isothiocyanate (FITC) is a fluorochrome that is commonly used for indirect immunofluorescence and in forensics and serology to detect latent blood stains. Active molecules (such as antibodies) may be attached to FITC, allowing biologists to target the fluorophore to specific proteins or structures within cells. The fluorescence of FITC is very high; excitation occurs at 494 nm, while emission occurs at 525 nm. The isothiocyanate group (-N=C=S) replaces a hydrogen atom on the bottom ring of the FITC structure and is reactive with amine groups on proteins inside cells. FITC specifically inactivates the Na^+- and K^+-stimulated adenosine triphosphatase ((Na,K)-ATPase) at low concentrations.

REFERENCES

1. Carilli, C.T., et al. 1982. The active site structure of Na^+- and K^+-stimulated ATPase. Location of a specific fluorescein isothiocyanate reactive site. J. Biol. Chem. 257: 5601-5606.
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4. Petrov, V.V., et al. 1997. Yeast plasma-membrane H^+-ATPase: role of Cys 409 in interaction of the enzyme with NEM and FITC. Folia Microbiol. 42: 249-250.
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SOURCE

FITC (F4/1) is a mouse monoclonal antibody raised against FITC conjugated to KLH.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of either PBS containing 1% stabilizer protein, and 0.02% sodium azide (for IF) or PBS containing 0.1% Gel and 0.1% sodium azide (for FCM).

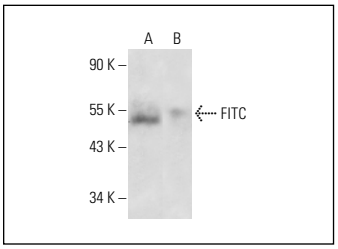
STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

FITC (F4/1) is recommended for detection of FITC by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

DATA



FITC (F4/1): sc-65218. Western blot analysis of FITC-conjugated rat IgG (**A**) and unconjugated rat IgG (**B**).

SELECT PRODUCT CITATIONS

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RESEARCH USE

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