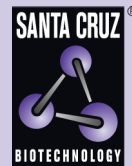


# FITC (FITC-11): sc-69872



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<sup>+</sup>- and K<sup>+</sup>-stimulated adenosine triphosphatase ((Na,K)-ATPase) at low concentrations.

## REFERENCES

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- Kirley, T.L., et al. 1984. The amino acid sequence of the fluorescein isothiocyanate reactive site of lamb and rat kidney Na<sup>+</sup>- and K<sup>+</sup>-dependent ATPase. *Biochem. Biophys. Res. Commun.* 125: 767-773.
- Juarranz, A., et al. 1996. Fluorescent porphyrin counterstaining of chromatin DNA in conjunction with immunofluorescence methods using FITC-labelled antibodies. *J. Microsc.* 182: 46-49.
- Petrov, V.V., et al. 1997. Yeast plasma-membrane H<sup>+</sup>-ATPase: role of Cys 409 in interaction of the enzyme with NEM and FITC. *Folia Microbiol.* 42: 249-250.
- Cherukuri, A., et al. 1998. FITC-poly-D-lysine conjugates as fluorescent probes to quantify hapten-specific macrophage receptor binding and uptake kinetics. *Cytometry* 31: 110-124.
- Nigatu, W., et al. 1999. Detection of measles specific IgG in oral fluid using an FITC/anti-FITC IgG capture enzyme linked immunosorbent assay (GACELISA). *J. Virol. Methods* 83: 135-144.
- Ohkubo, R., et al. 2003. Comparative study of flux of FITC-labeled Dextran 4000 on normal iso- and hyper-osmolarity in basal side in Caco-2 cell monolayers. *Drug Metab. Pharmacokinet.* 18: 404-408.
- Bramkamp, M., et al. 2004. FITC binding site and p-nitrophenyl phosphatase activity of the Kdp-ATPase of *E. coli*. *Biochemistry* 43: 4559-4567.
- Stewart, J.R., et al. 2006. Uptake of Dextran-FITC by epithelial cells of the chorioallantoic placental and the omphalopleure of the placental trophoblast, *Pseudomoma entrecasteauxii*. *J. Exp. Zool. A Comp. Exp. Biol.* 305: 883-889.

## SOURCE

FITC (FITC-11) is a mouse monoclonal antibody raised against FITC conjugated to BSA.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain 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).

FITC (FITC-11) is available conjugated to agarose (sc-69872 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-69872 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69872 PE), fluorescein (sc-69872 FITC), Alexa Fluor® 488 (sc-69872 AF488), Alexa Fluor® 546 (sc-69872 AF546), Alexa Fluor® 594 (sc-69872 AF594) or Alexa Fluor® 647 (sc-69872 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-69872 AF680) or Alexa Fluor® 790 (sc-69872 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

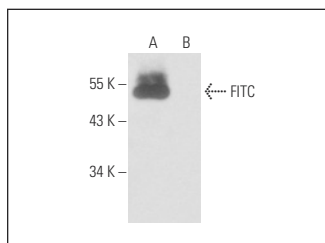
FITC (FITC-11) is recommended for detection of FITC by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of FITC: 77 kDa.

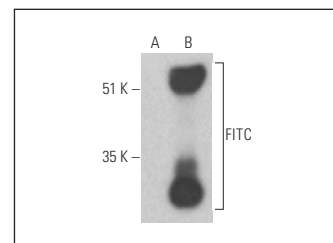
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



FITC (FITC-11): sc-69872. Western blot analysis of FITC-conjugated rat IgG (A) and unconjugated rat IgG (B).



FITC (FITC-11) HRP: sc-69872 HRP. Direct western blot analysis of FITC under reducing conditions in unconjugated normal rat IgG (A) and FITC-conjugated normal rat IgG (B).

## SELECT PRODUCT CITATIONS

- Yi, Y.S., et al. 2022. Syk promotes phagocytosis by inducing reactive oxygen species generation and suppressing SOCS1 in macrophage-mediated inflammatory responses. *Int. J. Immunopathol. Pharmacol.* 36: 3946320221133018.

## RESEARCH USE

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