SANTA CRUZ BIOTECHNOLOGY, INC.

FSBA (FSBA 2F5/5): sc-53287

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Kinases play a major role in many cellular processes by catalyzing the transfer of phosphoryl groups from ATP to a large variety of substrates, including amino acids on target proteins. The reagent 5'-fluorosulfonylbenzoyl-5'-adenosine (FSBA) has been used to identify ATP-binding sites in kinases because it is an ATP-affinity reagent that reacts with nucleophilic amino acids and covalently modifies conserved lysines present in the nucleotide-binding site of kinases. FSBA accomplishes this by first binding to the regulatory site that has a high affinity for ADP and pyrophosphate to increase the Vmax of the enzyme and then associating with a second regulatory site, a low-affinity site, which increases FSBAs rate of binding. FSBA may subsequently be detected and affinity purified using an anti-FSBA antibody. FSBA also exclusively inactivates the ATP-diphosphohydrolase in human placental mitochondria, thereby inhibiting progesterone synthesis and oxygen consumption.

REFERENCES

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4. Kim, H.S., et al. 1991. Identification of the ATP binding sites of the carbamyl phosphate synthetase domain of the Syrian hamster multifunctional protein CAD by affinity labeling with 5'-fluorosulfonyl-benzoyl-5'-adenosine. Biochemistry 30: 10322-10329.
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6. Hartog, A.F., et al. 1997. FSBA modifies both α and β subunits of F1 specifically and can be bound together with AXP at the same α subunit. Biochim. Biophys. Acta 1318: 107-122.
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8. Flores-Herrera, O., et al. 2002. 5'-fluorosulfonylbenzoyl-5'-adenosine inhibits progesterone synthesis in human placental mitochondria. Biochim. Biophys. Acta 1585: 11-18.
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STORAGE

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

SOURCE

FSBA (FSBA 2F5/5) is a mouse monoclonal antibody raised against fluorylsulfonylbenzoyladenosine (FSBA, a reactive ATP analog) coupled to carrier proteins.

PRODUCT

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

FSBA (FSBA 2F5/5) is available conjugated to agarose (sc-53287 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53287 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53287 PE), fluorescein (sc-53287 FITC), Alexa Fluor® 488 (sc-53287 AF488), Alexa Fluor® 546 (sc-53287 AF546), Alexa Fluor® 594 (sc-53287 AF594) or Alexa Fluor® 647 (sc-53287 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53287 AF680) or Alexa Fluor® 790 (sc-53287 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FSBA (FSBA 2F5/5) is recommended for detection of protein kinases labelled with FSBA by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

RESEARCH USE

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

PROTOCOLS

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