SANTA CRUZ BIOTECHNOLOGY, INC.

Ethenoadenosine (1G4): sc-52666

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The Power to Question

BACKGROUND

Ethenobases are adduct products of exposure to an occupational carcinogen, vinyl chloride. Ethenoadenosine oligophosphates (ε-ATP, ε-ADP, ε-AMP and ε-Ad) are used as fluorophores and have the same luminous group (ε-adenine ring) with variously charged phosphate groups. Ethenoadenosine oligophosphates are used to examine chemical mechanisms that are not well understood. ε-ADP, in particular, is often used to probe skeletal muscle myosin, since the protein displays two independent and equivalent binding sites for 1,N^6 Ethenoadenosine diphosphate.

REFERENCES

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2. Ando, T. and Asai, H. 1980. Charge effects on the dynamic quenching of fluorescence of 1,N^6 Ethenoadenosine oligophosphates by iodide, thallium (I) and acrylamide. J. Biochem. 88: 255-264.
3. Paulsen, H. and Wintermeyer, W. 1984. Incorporation of 1,N^6 ethenoadenosine into the 3' terminus of tRNA using T4 RNA ligase. 2. Preparation and ribosome interaction of fluorescent *Escherichia coli* tRNAMetf. Eur. J. Biochem. 138: 125-130.
4. Young, T. and Santella, R.M. 1988. Development of techniques to monitor for exposure to vinyl chloride: monoclonal antibodies to Ethenoadenosine and ethenocytidine. Carcinogenesis 9: 589.
5. Grazi, E., et al. 2001. A possible solvent eff 1,N^6 Ethenoadenosine diphosphate to myosin from skeletal muscle. Biochim. Biophys. Acta 1525: 130-135.
6. Oaknin, S., et al. 2001. Receptor binding properties of di (1,N^6 Ethenoadenosine) 5', 5'''-P1, P4- and its modulatory effect on extracellular glutamate levels in rat striatum. Neurosci. Lett. 309: 177-180.
7. Krebs, C., et al. 2003. Flow cytometric and immunoblot assays for cell surface ADP-ribosylation using a monoclonal antibody specific for Ethenoadenosine. Anal. Biochem. 314: 108.
8. Koissi, N. and Lönnberg, H. 2003. Synthesis of an oligonucleotide analogue of Ethenoadenosine. Nucleosides Nucleotides Nucleic Acids 22: 1135-1137.
9. Tatarintsev, N.P. and Mal'ian, A.N. 2006. Covalent binding of 1,N^6 Ethenoadenosine diphosphate to catalytic and noncatalytic sites of chloroplast ATP-synthase. Biofizika 51: 282-287.

SOURCE

Ethenoadenosine (1G4) is a mouse monoclonal antibody raised against Ethenoadenosine.

STORAGE

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

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG_{2a} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ethenoadenosine (1G4) is available conjugated to agarose (sc-52666 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-52666 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-52666 PE), fluorescein (sc-52666 FITC), Alexa Fluor® 488 (sc-52666 AF488), Alexa Fluor® 546 (sc-52666 AF546), Alexa Fluor® 594 (sc-52666 AF594) or Alexa Fluor® 647 (sc-52666 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-52666 AF680) or Alexa Fluor® 790 (sc-52666 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Ethenoadenosine (1G4) is recommended for detection of Ethenoadenosine 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Molecular Weight of Ethenoadenosine: 29 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGλ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

SELECT PRODUCT CITATIONS

1. Black, M.H., et al. 2021. A *Legionella* effector ADP-ribosyltransferase inactivates glutamate dehydrogenase. J. Biol. Chem. E-published.

PROTOCOLS

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