



anti-Cyanine (A-12): sc-166936

BACKGROUND

Cyanine is a non-systematic name of a synthetic dye family belonging to the polymethine group. The family of cyanine dyes include Cy2, Cy3, Cy5, Cy7 and their derivatives, which the numbers are based on the partially saturated indole nitrogen heterocyclic nucleus with two aromatic units being connected via a polyalkene bridge of varying carbon number. Cyanines have many uses as fluorescent dyes, particularly in biomedical imaging. Depending on the structure, they cover the spectrum from infrared to ultraviolet. Cyanines are utilized to increase the sensitivity range of photographic emulsions, such as increasing the range of wavelengths which will form an image on film. Cyanines are mostly green or light blue in color, and are chemically unstable. Anti-Cyanine may be immobilized and used to bind the Cyanine dyes in a linker system. A linker system is provided where a small molecule reactive group, e.g., an activity based probe which binds to certain enzymes at the active site, is linked through an aryl diazo linker to an affinity molecule.

REFERENCES

1. Lee, H., et al. 2008. Fluorescence lifetime properties of near-infrared cyanine dyes in relation to their structures. *J. Photochem. Photobiol. A Chem.* 200: 438-444.
2. Wang, Y. and Kobayashi, T. 2010. Electronic and vibrational coherence dynamics in a cyanine dye studied using a few-cycle pulsed laser. *Chemphyschem* 11: 889-896
3. Mahmood, T., et al. 2010. Synthesis and spectroscopic and DNA-binding properties of fluorogenic acridine-containing cyanine dyes. *J. Org. Chem.* 75: 204-207.
4. Heier, J., et al. 2010. Fast assembly of cyanine dyes into aggregates onto [6,6]-Phenyl C₆₁-Butyric acid Methyl Ester surfaces from organic solvents. *Langmuir* 26: 3955-3961.
5. Yang, Q., et al. 2010. Verification of specific G-quadruplex structure by using a novel cyanine dye supramolecular assembly: II. The binding characterization with specific intramolecular G-quadruplex and the recognizing mechanism. *Nucleic Acids Res.* 38: 1022-1033.
6. Bogoy Matthew, S., et al. 2010. Mild Chemically Cleavable Linker System. United States. The Board of Trustees of the Leland Stanford Junior University. 20100003735. World Wide Web URL: <http://www.freepatentsonline.com/y2010/0003735.html>

SOURCE

anti-Cyanine (A-12) is a mouse monoclonal antibody specific for the detection of Cyanine dyes.

PRODUCT

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

STORAGE

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

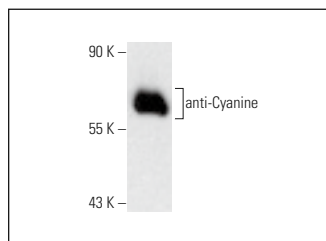
APPLICATIONS

anti-Cyanine (A-12) is recommended for detection of Cyanine by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



anti-Cyanine (A-12): sc-166936. Western blot analysis of cyanine expression in Cy5-conjugated BSA.

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.



See **Cya A (3D1): sc-13582** for Cya A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.