

Fullerene (1-10F-A8): sc-69901

BACKGROUND

In chemistry, different elements can exist in different forms known as allotropes, which differ with respect to structure and bonding. There are three families of carbon allotropes: Fullerenes, graphites and diamonds. Fullerenes exist as tubes, spheres or ellipsoids and are structurally similar to graphite, containing stacked sheets of hexagonal rings. The Fullerene family of carbon molecules exists in a variety of structural variations, some of which are called buckyball clusters, megatubes, nano onions and polymers. Due to their unique structure, Fullerenes are used in nanotechnology, superconductivity, antibiotic design and body armor construction and are thought to possess neuroprotective and antiviral activity. In their solid state, Fullerenes are known as fullerites, while high-pressure Fullerenes are known as ultrahard fullerites.

REFERENCES

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- Nielsen, G.D., et al. 2008. *In vivo* biology and toxicology of Fullerenes and their derivatives. *Basic Clin. Pharmacol. Toxicol.* 103: 197-208.

SOURCE

Fullerene (1-10F-A8) is a mouse monoclonal antibody raised against a C₆₀ Fullerene derivative conjugated to thyroglobulin of bovine origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Fullerene (1-10F-A8) is available conjugated to agarose (sc-69901 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-69901 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69901 PE), fluorescein (sc-69901 FITC), Alexa Fluor[®] 488 (sc-69901 AF488), Alexa Fluor[®] 546 (sc-69901 AF546), Alexa Fluor[®] 594 (sc-69901 AF594) or Alexa Fluor[®] 647 (sc-69901 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-69901 AF680) or Alexa Fluor[®] 790 (sc-69901 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Fullerene (1-10F-A8) is recommended for detection of C₆₀ Fullerene by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with C₇₀ Fullerene.

SELECT PRODUCT CITATIONS

- Chen, L., et al. 2014. The role of low levels of Fullerene C₆₀ nanocrystals on enhanced learning and memory of rats through persistent CaMKII activation. *Biomaterials* 35: 9269-9279.
- Miao, Y., et al. 2014. Nanoparticle as signaling protein mimic: robust structural and functional modulation of CaMKII upon specific binding to Fullerene C₆₀ nanocrystals. *ACS Nano* 8: 6131-6144.
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- Grebinyk, A., et al. 2019. Synergy of chemo- and photodynamic therapies with C₆₀ Fullerene-doxorubicin nanocomplex. *Nanomaterials* 9: 1540.

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.

PROTOCOLS

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

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