SANTA CRUZ BIOTECHNOLOGY, INC.

Fibrillarin (G-8): sc-374022

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fibrillarin is a widely occurring, basic, nonhistone protein that is localized exclusively in the fibrillar region of the nucleolus, including both the dense fibrillar and the fibrillar center regions. Fibrillarin is a protein that is also expressed in HeLa cells, 3T3 cells, and human peripheral blood lymphocytes. In metaphase and anaphase, Fibrillarin is found on putative chromosomal nucleolar regions (NORs). During telophase, Fibrillarin is an early marker for the site of the newly forming nucleolus. The structure of Fibrillarin includes an RNA-binding domain and an RNP consensus sequence, which is consistent with the association of Fibrillarin with the U3 small nucleolar RNA. Fibrillarin is involved in processing rRNA transcripts in the nucleolus.

REFERENCES

1. Ochs, R.L., et al. 1985. Fibrillarin: a new protein of the nucleolus identified by autoimmune sera. Biol. Cell 54: 123-133.
2. Aris, J.P. and Blobel, G. 1991. cDNA cloning and sequencing of human Fibrillarin, a conserved nucleolar protein recognized by autoimmune antisera. Proc. Natl. Acad. Sci. USA 88: 931-935.
3. Jansen, R.P., et al. 1991. Evolutionary conservation of the human nucleolar protein Fibrillarin and its functional expression in yeast. J. Cell Biol. 113: 715-729.

CHROMOSOMAL LOCATION

Genetic locus: FBL (human) mapping to 19q13.2; Fbl (mouse) mapping to 7 A3.

SOURCE

Fibrillarin (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 99-127 within an internal region of Fibrillarin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Fibrillarin (G-8) is available conjugated to agarose (sc-374022 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374022 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374022 PE), fluorescein (sc-374022 FITC), Alexa Fluor® 488 (sc-374022 AF488), Alexa Fluor® 546 (sc-374022 AF546), Alexa Fluor® 594 (sc-374022 AF594) or Alexa Fluor® 647 (sc-374022 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374022 AF680) or Alexa Fluor® 790 (sc-374022 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374022 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Fibrillarin (G-8) is recommended for detection of Fibrillarin of mouse, rat and human origin 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

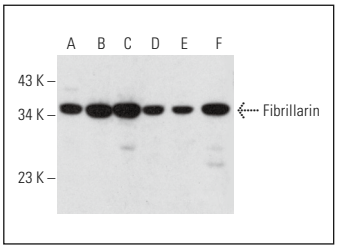
Fibrillarin (G-8) is also recommended for detection of Fibrillarin in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Fibrillarin siRNA (h): sc-37883, Fibrillarin siRNA (m): sc-37884, Fibrillarin shRNA Plasmid (h): sc-37883-SH, Fibrillarin shRNA Plasmid (m): sc-37884-SH, Fibrillarin shRNA (h) Lentiviral Particles: sc-37883-V and Fibrillarin shRNA (m) Lentiviral Particles: sc-37884-V.

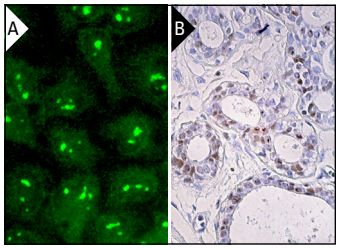
Molecular Weight of Fibrillarin: 36 kDa.

Positive Controls: JAR cell lysate: sc-2276, Hep G2 cell lysate: sc-2227 or c4 whole cell lysate: sc-364186.

DATA



Fibrillarin (G-8): sc-374022. Western blot analysis of Fibrillarin expression in JAR (**A**), Hep G2 (**B**), c4 (**C**), I-13.35 (**D**), A-10 (**E**) and PC-12 (**F**) whole cell lysates.



Fibrillarin (G-8): sc-374022. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nucleolar and nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Zhao, J.J., et al. 2016. Treatment with isorhamnetin protects the brain against ischemic injury in mice. Neurochem. Res. 41: 1939-1948.
2. Houston, R., et al. 2020. Acetylation-mediated remodeling of the nucleolus regulates cellular acetyl-CoA responses. PLoS Biol. 18: e3000981.
3. Berloco, M.F., et al. 2021. Evidence of the physical interaction between Rpl22 and the transposable element Doc5, a heterochromatic transposon of *Drosophila melanogaster.* Genes 12: 1997.
4. Cho, H.C., et al. 2022. Puf-A promotes cancer progression by interacting with nucleophosmin in nucleolus. Oncogene 41: 1155-1165.
5. Mensah, M.A., et al. 2023. Aberrant phase separation and nucleolar dysfunction in rare genetic diseases. Nature 614: 564-571.

RESEARCH USE

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