

NUDT21 (F-5): sc-515766

BACKGROUND

NUDT21 (nudix (nucleoside diphosphate linked moiety X)-type motif 21), also known as CPSF5 (cleavage and polyadenylation specificity factor subunit 5) or CFIm25 (cleavage and polyadenylation specificity factor 25 kDa subunit), is a member of the nudix hydrolase family of pyrophosphatases. Nudix hydrolases contain a characteristic NUDIX domain and are responsible for catalyzing the hydrolysis of nucleoside diphosphate derivatives. NUDT21 localizes to the paraspeckles and forms a heterodimer with CPSF6 or CPSF7 to comprise the CFIm (mammalian cleavage factor I) complex. NUDT21 is the smaller subunit of the complex and is present in all heterodimer combinations. CFIm plays an important role in pre-mRNA 3' cleavage and polyadenylation processing.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604978. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Kubo, T., et al. 2006. Knock-down of 25 kDa subunit of cleavage factor Im in HeLa cells alters alternative polyadenylation within 3'-UTRs. *Nucleic Acids Res.* 34: 6264-6271.
3. Forbes, K.P., et al. 2006. An *Arabidopsis* Fip1 homolog interacts with RNA and provides conceptual links with a number of other polyadenylation factor subunits. *J. Biol. Chem.* 281: 176-186.
4. Jung, J., et al. 2007. Overexpression, crystallization and preliminary X-ray crystallographic analysis of Nudix hydrolase Orf141 from *Escherichia coli* K-1. *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.* 63: 812-815.
5. Sartini, B.L., et al. 2008. Pre-messenger RNA cleavage factor I (CFIm): potential role in alternative polyadenylation during spermatogenesis. *Biol. Reprod.* 78: 472-482.

CHROMOSOMAL LOCATION

Genetic locus: NUDT21 (human) mapping to 16q12.2; Nudt21 (mouse) mapping to 8 C5.

SOURCE

NUDT21 (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 38-59 within an internal region of NUDT21 of human origin.

PRODUCT

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

NUDT21 (F-5) is available conjugated to agarose (sc-515766 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515766 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515766 PE), fluorescein (sc-515766 FITC), Alexa Fluor® 488 (sc-515766 AF488), Alexa Fluor® 546 (sc-515766 AF546), Alexa Fluor® 594 (sc-515766 AF594) or Alexa Fluor® 647 (sc-515766 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515766 AF680) or Alexa Fluor® 790 (sc-515766 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

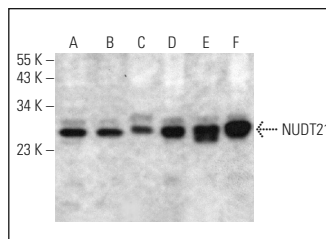
NUDT21 (F-5) is recommended for detection of NUDT21 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NUDT21 siRNA (h): sc-93336, NUDT21 siRNA (m): sc-77406, NUDT21 shRNA Plasmid (h): sc-93336-SH, NUDT21 shRNA Plasmid (m): sc-77406-SH, NUDT21 shRNA (h) Lentiviral Particles: sc-93336-V and NUDT21 shRNA (m) Lentiviral Particles: sc-77406-V.

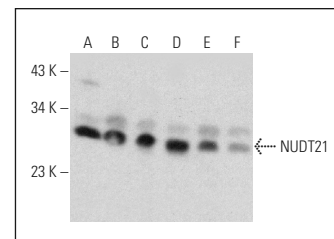
Molecular Weight of NUDT21: 25 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Hep G2 cell lysate: sc-2227 or A-431 nuclear extract: sc-2122.

DATA



NUDT21 (F-5): sc-515766. Western blot analysis of NUDT21 expression in RT-4 (A) and Hep G2 (B) whole cell lysates and U-251-MG (C), HeLa (D), A-431 (E) and IMR-32 (F) nuclear extracts.



NUDT21 (F-5): sc-515766. Western blot analysis of NUDT21 expression in HeLa (A), Neuro-2A (B), NIH/3T3 (C), F9 (D), C3H/10T1/2 (E) and C6 (F) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gerassimovich, Y.A., et al. 2021. Proximity-dependent biotinylation detects associations between SARS coronavirus nonstructural protein 1 and stress granule-associated proteins. *J. Biol. Chem.* E-pulished.

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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