

YTHDF3 (F-2): sc-377119

BACKGROUND

The YTH domain family protein family (YTHDF) includes YTHDF1, YTHDF2 and YTHDF3. YTHDF1, also designated dermatomyositis associated with cancer putative autoantigen 1 (DACA-1), is a 559 amino acid protein that contains one YTH domain, a potential RNA binding domain. YTHDF2, also designated high-glucose-regulated protein 8, CLL-associated antigen KW-14 or Renal carcinoma antigen NY-REN-2, is a 579 amino acid protein that also contains one YTH domain. YTHDF3 is a 585 amino acid protein that also contains one YTH domain. The gene encoding YTHDF3 maps to chromosome 8, which encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder.

REFERENCE

- Wildenauer, D.B. and Schwab, S.G. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
- Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. *Biochem. Biophys. Res. Commun.* 289: 111-115.

CHROMOSOMAL LOCATION

Genetic locus: YTHDF3 (human) mapping to 8q12.3; Ythdf3 (mouse) mapping to 3 A1.

SOURCE

YTHDF3 (F-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 85-119 within an internal region of YTHDF3 of human origin.

PRODUCT

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

YTHDF3 (F-2) is available conjugated to agarose (sc-377119 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377119 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377119 PE), fluorescein (sc-377119 FITC), Alexa Fluor® 488 (sc-377119 AF488), Alexa Fluor® 546 (sc-377119 AF546), Alexa Fluor® 594 (sc-377119 AF594) or Alexa Fluor® 647 (sc-377119 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377119 AF680) or Alexa Fluor® 790 (sc-377119 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377119 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

YTHDF3 (F-2) is recommended for detection of YTHDF3 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).

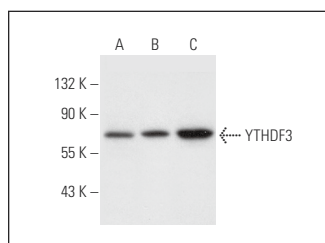
YTHDF3 (F-2) is also recommended for detection of YTHDF3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for YTHDF3 siRNA (h): sc-77724, YTHDF3 siRNA (m): sc-155425, YTHDF3 shRNA Plasmid (h): sc-77724-SH, YTHDF3 shRNA Plasmid (m): sc-155425-SH, YTHDF3 shRNA (h) Lentiviral Particles: sc-77724-V and YTHDF3 shRNA (m) Lentiviral Particles: sc-155425-V.

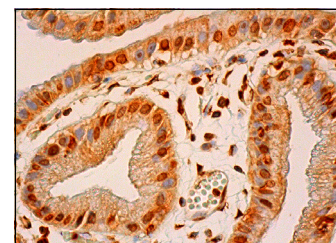
Molecular Weight of YTHDF3: 64 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, U-87 MG cell lysate: sc-2411 or SK-MEL-28 cell lysate: sc-2236.

DATA



YTHDF3 (F-2): sc-377119. Western blot analysis of YTHDF3 expression in AML-193 (A), U-87 MG (B) and SK-MEL-28 (C) whole cell lysates.



YTHDF3 (F-2): sc-377119. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Shi, H., et al. 2017. YTHDF3 facilitates translation and decay of N⁶-methyladenosine-modified RNA. *Cell Res.* 27: 315-328.
- Martinez De La Cruz, B., et al. 2021. Modifying the m⁶A brain methylome by ALKBH5-mediated demethylation: a new contender for synaptic tagging. *Mol. Psychiatry* 26: 7141-7153.
- Petrosino, J.M., et al. 2022. The m⁶A methyltransferase METTL3 regulates muscle maintenance and growth in mice. *Nat. Commun.* 13: 168.
- Wang, X., et al. 2023. N⁶-methyladenosine of Spi2a attenuates inflammation and sepsis-associated myocardial dysfunction in mice. *Nat. Commun.* 14: 1185.

RESEARCH USE

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