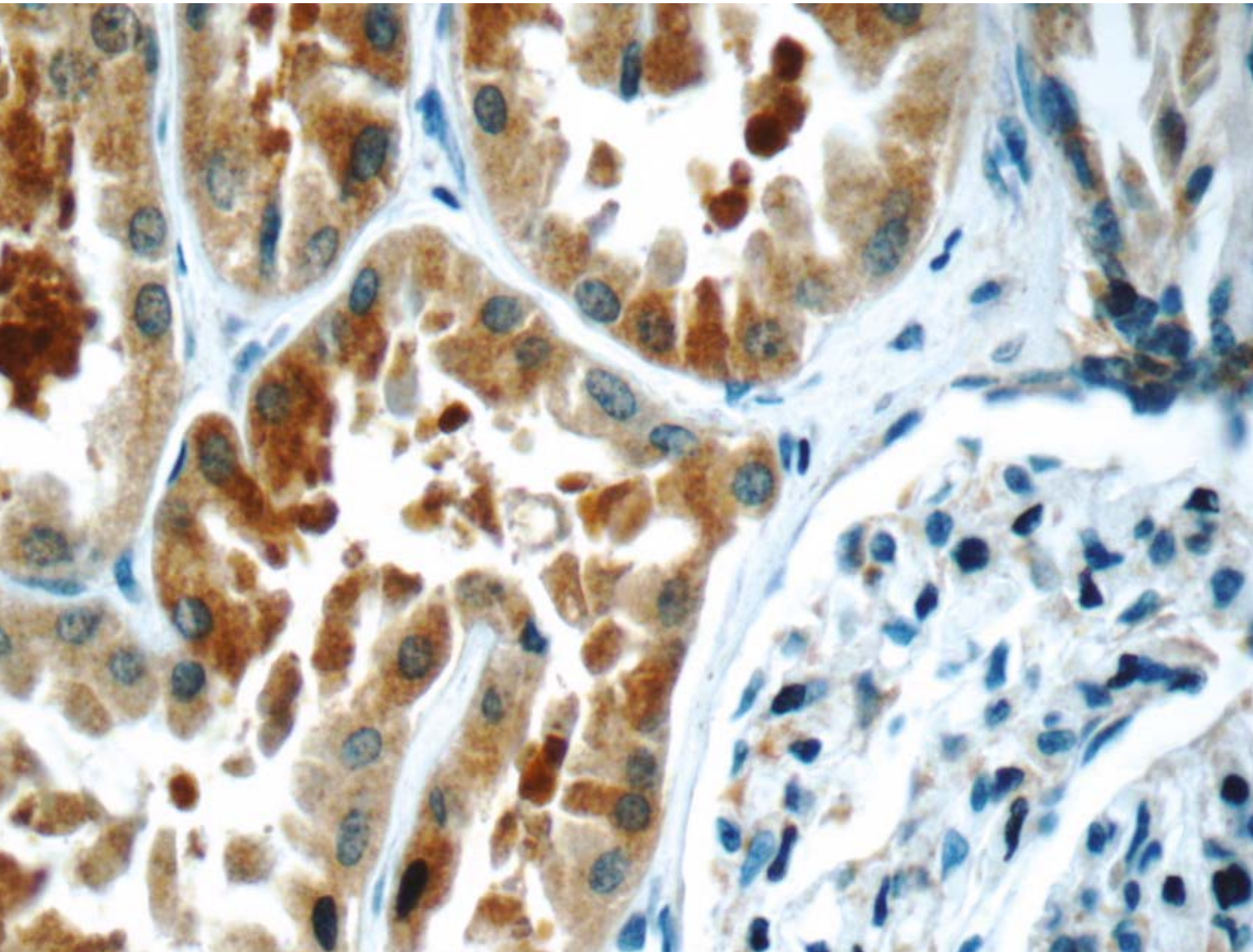


mRNA PROCESSING CATALOG

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Front Cover:

Immunohistochemistry of paraffin-embedded human kidney tissue slide using KIAA0182 antibody (24947-1-AP) at a dilution of 1:50 (40x objective).

WELCOME

Foreword

RNA processing is important for the post-transcriptional regulation of gene expression, and is a rate-limiting step in the expression of proteins. The majority of RNA processing occurs simultaneously with transcription, at which stage several processes shape the nascent messenger RNA (mRNA) molecule: mRNA capping, splicing, editing and 3' end formation. Throughout these processes, various enzymes and proteins play an important role in stabilizing mRNA transcripts.

In addition to co-transcriptional regulation, RNAs – both coding mRNAs and non-coding species – can also be controlled at the post-transcriptional level. There are around 150 known RNA modifications, yet our knowledge about their occurrence and function is still limited. One thing is certain though: post-transcriptional regulation of gene expression is much more intricate than previously thought. Unravelling the inner workings of it is essential to understanding gene expression in its entirety, and will provide valuable insights into post-transcriptional dysfunction in numerous genetic diseases and cancer. This catalog contains antibodies targeting proteins involved in several aspects of RNA processing, selected for researchers making the discoveries in this area.

What's Inside

4-6 Product Focus

- CIRBP
- RTCB
- SF3B3
- METTL3

7-10 Antibodies:

AICDA → ZCRB1

11 Contact Us

PRODUCT FOCUS

CIRBP

Catalog Number
10209-2-AP

Type
Rabbit Polyclonal

Applications
ELISA, IF, IHC, IP, Supershift Assay, WB

31 Publications

KD/KO Validated

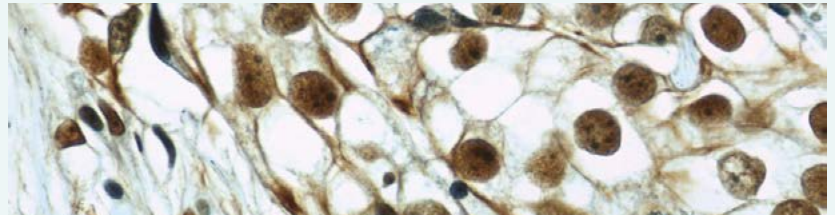
Cellular stress, such as a sudden drop in temperature, results in the expression of several proteins involved in transcription, translation and splicing of cold-shock proteins. Cold-inducible mRNA binding protein, CIRBP, (also named A18HNRNP or CIRP) plays an important role in the protection of gene transcripts from genotoxic stressors, such as hypoxia, hypothermia and UV light. When cells are subjected to stress, CIRBP has the ability to translocate from the nucleus to the cytoplasm where it acts to stabilize mRNA.

Recently, CIRBP has been linked with oral squamous cell carcinoma (OSCC); the commonest type of head and neck malignancy, representing almost 95% of head and neck cancers. In a recent study, Ren et al. showed elevated expression of CIRBP and toll-like receptor 4 (TLR4) in OSCC patients.¹

Previously, CIRBP has been shown to induce inflammatory action through TLR4. The development of OSCC is due, in part, to chronic inflammation, although a full understanding of the pathogenesis of the condition still remains elusive. It has been suggested that activation of TLR4 can induce chronic inflammation, which, in turn, promotes tumor growth.

Using Proteintech[®]'s antibody against CIRBP (10209-2-AP), Ren and colleagues selected biopsy samples from OSCC patients and control subjects and analyzed them for CIRBP and TLR4 expression. They were able to demonstrate that CIRBP was over-expressed in 37.7 percent of patients and under-expressed in a further 62.3 percent. On the contrary, tissue from control patients showed no expression of TLR4 or CIRBP. Further to this, the authors sought to compare the relationship between survival rates of patients with OSCC and overexpression of CIRP or TLR4. It was shown that overexpression of either marker resulted in a significantly poorer prognosis. This could be partly due to CIRBP's role in the underlying pathogenesis of the OSCC cases from the outset, but it has also been reported that CIRBP protects against TNF-alpha induced apoptosis. Thus, it could also confer OSCC's with a survival advantage.

The findings from this study support the hypothesis that CIRBP and/or TLR4 may play an important biological function in the development of OSCC. Furthermore, they may in future serve as diagnostic markers in predicting patient outcomes.



Immunohistochemical of paraffin-embedded human breast cancer using CIRBP antibody (10209-2-AP) at a dilution of 1:50 (40x objective).

Related Antibodies

Antibody Name	Catalog Number	Type	Applications
Anti-TLR4	14 19811-1-AP	Rabbit Poly	ELISA, IHC, WB

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RTCB

Catalog Number
19809-1-AP

Type
Rabbit Polyclonal

Applications
ELISA, IF, IP, WB

1 Publication

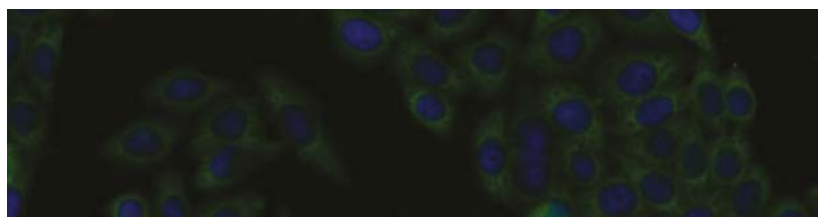
The endoplasmic reticulum (ER) is an organelle found in eukaryotic cells in two forms: smooth ER and rough ER. The two types of ER function primarily to aid the folding of proteins and the transport of those newly synthesized to the Golgi apparatus. The maintenance of protein folding networks found within the ER is carried out by the unfolded protein response (UPR). The UPR consists of three signaling branches distinguished by the principal enzymes by which they act: AFT6, PERK and IRE1. The IRE1 branch of the UPR initiates the splicing of mRNA of XBP1 during ER stress. XBP1 is a key UPR transcription factor.

During splicing, the enzyme known as IRE1-alpha cleaves the sole intron of the XBP1 transcript, leaving two remaining exons needing ligation. However, the identity of the enzyme that does this was a mystery

until the publication of a Molecular Cell paper in September 2014.²

Using Proteintech's anti-RtcB antibody (19809-1-AP), the Lu et al. Molecular Cell paper showed that RtcB is the elusive RNA ligase essential for the joining of XBP1 exons during the UPR. The authors were able to show that RtcB acts downstream of IRE1-alpha, demonstrating this occurs after removal of intron sequences. Furthermore, XBP1 mRNA splicing is defective in RtcB knockout cells during times of ER stress, which is restored following genetic rescue.

The authors have successfully demonstrated that RtcB is the ligase responsible for splicing occurring during UPR, a pathway now considered to have great importance in neurodegenerative disease.



Immunofluorescent analysis of HeLa cells using C22orf28 antibody (19809-1-AP) at a dilution of 1:25 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).

Related Antibodies

Antibody Name	Catalog Number	Type	Applications
XBP1	24168-1-AP	Rabbit Poly	ELISA, IHC, WB

SF3B3

Catalog Number
14577-1-AP

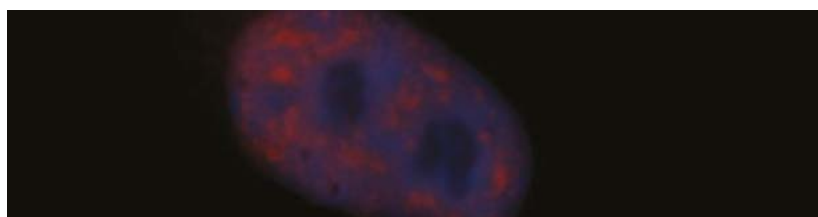
Type
Rabbit Polyclonal

Applications
ELISA, IF, IHC, IP, WB

4 Publications

During mRNA synthesis, mRNA splicing removes introns from nuclear pre-mRNA in a two-step process. This process occurs in a ribonucleoprotein complex known as the spliceosome, and requires the interaction of several proteins such as Splicing factor 3b (SF3B3). Along with splicing factor 3A and a 12s RNA unit, SF3B3 makes up the U2 small nuclear ribonucleoproteins complex (U2 snRNP), which is recruited along with other U snRNPs to a pre-mRNA substrate to assemble spliceosomes. These undergo ATP-dependent rearrangements to form intermediates known as E, A, B, Bact, B*, and C complexes. Not all of these interactions have been characterized, partly because it has not been possible to arrest the complex at clearly defined chemical states.

In a recent publication, Ilagan et al. devised a way of stalling human spliceosomes in a new post-catalytic state (which they named the P complex). Quantitative comparisons of P complex and C complex units showed an increase of SF3b components in the spliceosome and a loss of putative RNA-dependent ATPase DHX35. Using Proteintech's anti-SF3B3 antibody (14577-1-AP) and their novel method of spliceosome arrest, the authors have taken a snapshot of the human spliceosome before and after splicing. The work of Ilgan et al. has opened a new window to viewing rearrangements near the active site of spliceosomes, allowing us to peer into the inner workings of exon ligation and mRNA release.



Immunofluorescence staining of SF3B3 in HeLa cells using SF3B3 antibody (14577-1-AP) at a 1:50 dilution, detected with rhodamine-labeled goat anti-rabbit IgG (red). Blue = DAPI DNA counterstain.

Related Antibodies

Antibody Name	Catalog Number	Type	Applications
DHX35	24923-1-AP	Rabbit Poly	ELISA, IHC, WB
SF3A1	1 15858-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SF3A2	15596-1-AP	Rabbit Poly	ELISA, IHC, WB
SF3A3	12070-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB

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METTL3

Catalog Number
15073-1-AP

Type
Rabbit Polyclonal

Applications
ELISA, IF, IP, WB (siRNA), WB

9 Publications

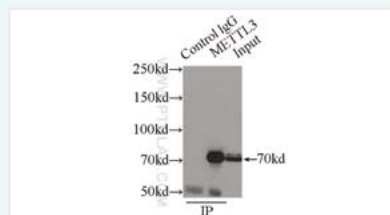
KD/KO Validated

Methyltransferase like 3, also known as METTL3, is an enzyme involved in the post-transcriptional methylation of adenosine bases in mRNA, with its action resulting in the formation of N6 methyladenosine (m6A). This form of modification is the most prevalent internal modification in mammalian mRNA and non-coding RNA: RNA-immunoprecipitation methods followed by next generation sequencing have uncovered that more than 7,000 mRNAs and over 2,000 long non-coding RNAs contain m6A sites and these are most often located at stop codons.³ The precise biological functions of m6A-methyltransferases are not fully characterized, but evidence so far implicates a role in embryo development, gametogenesis and stem cell self-renewal.

METTL3 also interacts with METTL14, another enzyme involved in the formation of m6A. The interaction between METTL3 and METTL14 occurs in the form of a heterodimer complex that results in the m6A depositions on nuclear RNA. The paper that reported this finding also featured a Proteintech

antibody recognizing METTL3 (15073-1-AP). Using gel filtration, Liu et al. were able to show that METTL3 and METTL14 formed a stable heterodimeric complex in vitro. They further demonstrated that RNA interference knockdown of METTL3, METTL14 and WTAP (Wilms Tumor 1-Associating Protein) in HeLa cells reduced m6A additions to RNA by 30%, 40%, 50% respectively.⁴ Additional investigation showed that both METTL3 and METTL14 exhibited methyltransferase activity with METTL14 showing considerably higher enzymatic activity than METTL3.

In summary, the authors showed that the newly discovered methyltransferase METTL14 forms a stable complex with METTL3, which acts to deposit m6A on RNA, with WTAP interacting with the METTL3-METTL14 complex modulating cellular m6A deposition. Furthermore, this activity is modulated by WTAP. The elucidation of this novel methyltransferase complex may prove a novel target in modulating gene expression and help shed light on the purpose of mRNA methylation in health and disease.



Western blot results of an immunoprecipitation experiment using anti-METTL3 to capture and detect METTL3 from HEK-293 cells lysate (4.5 mg).

Related Antibodies

Antibody Name	Catalog Number	Type	Applications
Anti-WTAP	1 10200-1-AP	Rabbit Poly	ELISA, IF, IP, WB
Anti-WTAP	3 60188-1-Ig	Mouse Mono	ELISA, IF, IHC, WB (siRNA), WB

00 This number shows the amount of times our antibody has been cited in a publication.

References

- Ren, W. et al. (2014) Protein overexpression of CIRBP and TLR4 in oral squamous cell carcinoma: an immunohistochemical and clinical correlation analysis. *Med. Oncol.* 31, 120.
- Lu, Y. et al. (2014) A synthetic biology approach identifies the mammalian UPR RNA ligase RtcB. *Mol. Cell.* 55, 758-770.
- D. Dominissini et al. Topology of the human and mouse m6A RNA methylomes revealed by m6A-seq *Nature*, 485 (2012), pp. 201-206.
- Liu et al. (2014). A METTL3-METTL14 complex mediates mammalian nuclear RNA N6-adenosine methylation. *Nat. Chem. Biol.* 10, 93-95.

AICDA
→ FAM98B

ANTIBODY PRODUCT LIST

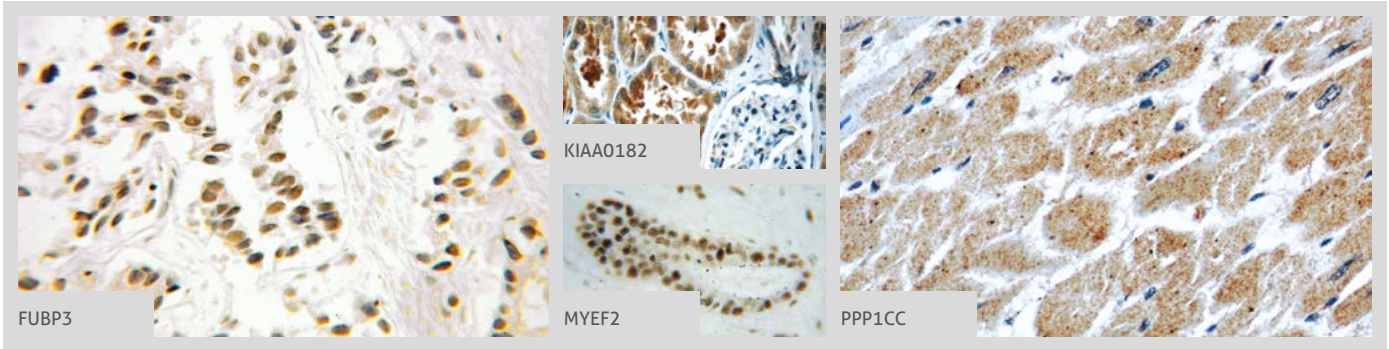
Antibody Name	Cat. No.	Type	Applications
AICDA	15642-1-AP	Rabbit Poly	ELISA, WB
ALKBH5	16837-1-AP	Rabbit Poly	ELISA, WB
ANKS1B	24783-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
APOBEC2	20121-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
APOBEC3B	14559-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
APOBEC3C	10591-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
APOBEC3G	60100-1-Ig	Mouse Mono	ELISA, IF, IHC, WB
ASCC3	17627-1-AP	Rabbit Poly	ELISA, IP, WB
ASF/SF2	2 12929-2-AP	Rabbit Poly	ELISA, IF, IP, WB
BCAS2	2 10414-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
BRUNOL5	13557-1-AP	Rabbit Poly	ELISA, IHC, WB
BRUNOL6	19078-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
CBP20	11950-1-AP	Rabbit Poly	ELISA, WB
CCDC50	21082-1-AP	Rabbit Poly	ELISA, IHC, WB
CCDC72	20393-1-AP	Rabbit Poly	ELISA, IHC, WB
CCDC93	3 20861-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
CCDC94	19431-1-AP	Rabbit Poly	ELISA, IHC, WB
CCNL1	13138-1-AP	Rabbit Poly	ELISA, WB
CD32	15625-1-AP	Rabbit Poly	ELISA, FC, WB
CHD1	3 20576-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
CHERP	25389-1-AP	Rabbit Poly	ELISA, IHC, WB
CIRBP	31 10209-2-AP	Rabbit Poly	ELISA, IF, IHC, IP, Supershift Assay, WB
CLP1	14746-1-AP	Rabbit Poly	ELISA, WB
CPEB1	4 13274-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
CPEB4	25342-1-AP	Rabbit Poly	ELISA, IF, WB
CPSF1	11031-1-AP	Rabbit Poly	ELISA, WB

Antibody Name	Cat. No.	Type	Applications
CPSF2	17739-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
CPSF3	11609-1-AP	Rabbit Poly	ELISA, WB
CPSF6	2 15489-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
CSTF2T	14206-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
CSTF3	24290-1-AP	Rabbit Poly	ELISA, IP, WB
CUGBP1	13002-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
CUGBP2	12921-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
CWC15	25293-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
DAZAP1	11120-1-AP	Rabbit Poly	ELISA, IHC
DBR1	4 16019-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
DDX23	10199-2-AP	Rabbit Poly	ELISA, WB
DDX5 (p68)	10804-1-AP	Rabbit Poly	ELISA, IHC, WB
DHX15	12265-1-AP	Rabbit Poly	ELISA, IP, WB
DHX16	11021-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
DHX29	13923-1-AP	Rabbit Poly	ELISA, WB
DHX32	19808-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
DHX35	24923-1-AP	Rabbit Poly	ELISA, IHC, WB
DHX36	13159-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
DHX38	4 10098-2-AP	Rabbit Poly	ChIP, ELISA, IF, IP, WB
DHX57	24525-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
DHX9	3 17721-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
DNMT2	19221-1-AP	Rabbit Poly	ELISA, WB
DUSP11	10204-2-AP	Rabbit Poly	ELISA, IF, WB
EFTUD2	5 10208-1-AP	Rabbit Poly	ELISA, IF, IP, WB
ELAVL2	3 14008-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
ESRP2	23117-1-AP	Rabbit Poly	ELISA, WB
FAM98B	22251-1-AP	Rabbit Poly	ELISA, IF, IHC, WB

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FUBP1
→ PRPF39

More validation images available on our website. 

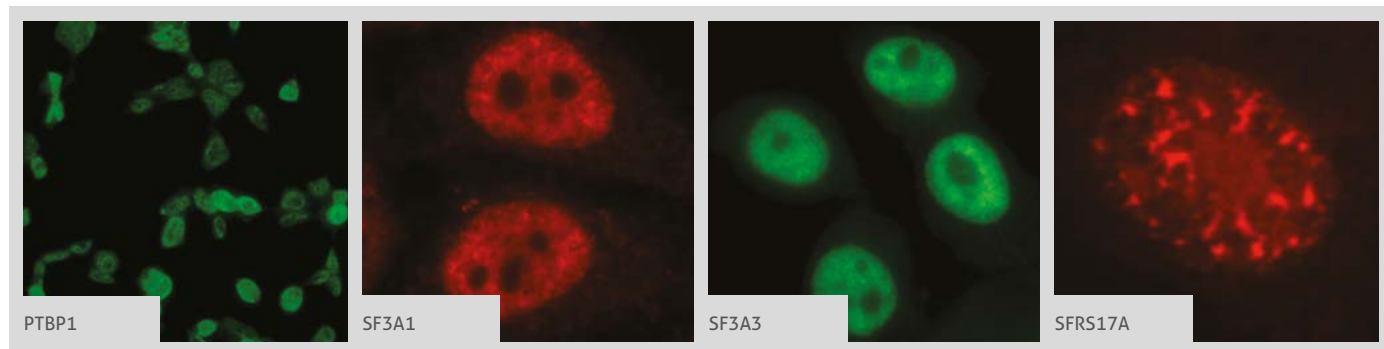


Antibody Name	Cat. No.	Type	Applications
FUBP1	24864-1-AP	Rabbit Poly	ELISA, IF, IP, WB
FUBP3	 10623-1-AP	Rabbit Poly	ELISA, IHC, WB
FUSIP1	10131-1-AP	Rabbit Poly	ELISA, WB
GEMIN5	24897-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
GRWD1	10354-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
HNRNPAO	10848-1-AP	Rabbit Poly	ELISA, IF, WB
HNRNPA1	 11176-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
HNRNPA2B1	 14813-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
HNRNPA3	25142-1-AP	Rabbit Poly	ELISA, IF, WB
HNRNPC	11760-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, IP, WB
HNRNPD	 12770-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
HNRNPF	14974-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
HNRNPH1	14774-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
HNRNPH3	17674-1-AP	Rabbit Poly	ELISA, IF, WB
HNRNPK	 11426-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, IP, WB
HNRNPL	18354-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
HNRNPR	15018-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
HuC	55047-1-AP	Rabbit Poly	ELISA, IHC, WB
HuC/D	13032-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
HuD	24992-1-AP	Rabbit Poly	ELISA, IF, IP, WB
HuR	 11910-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, IP, WB
INT11	15860-1-AP	Rabbit Poly	ELISA, IF, WB
KHSRP	 55409-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
KIAA0182	 24947-1-AP	Rabbit Poly	ELISA, IHC, WB
LSM1	10259-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
LSM4	10834-1-AP	Mouse Mono	ELISA, IF, IHC, WB
LSM5	10700-1-AP	Rabbit Poly	ELISA, IF, WB
LSM7	18941-1-AP	Mouse Mono	ELISA, IHC, WB
LSM8	10134-1-AP	Rabbit Poly	ELISA, IF, WB
MAGOH	 12347-1-AP	Rabbit Poly	ELISA, IHC, IP, WB

Antibody Name	Cat. No.	Type	Applications
METTL3	 15073-1-AP	Rabbit Poly	ELISA, IF, IP, WB (siRNA), WB
MYEF2	 16051-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, IP, WB
NCBP1	 10349-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
NMD3	 16060-1-AP	Rabbit Poly	ELISA, IF, IP, WB
NOL9	16083-1-AP	Rabbit Poly	ELISA, IF, WB
NONO	 11058-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, IP, WB
NOVA2	55002-1-AP	Rabbit Poly	ELISA, WB
NUDT21	 10322-1-AP	Rabbit Poly	ChIP, ELISA, IF, IHC, IP, WB
NUDT6	 11181-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
NSUN2	 20854-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
PABPC1 (PABP)	10970-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, IP, WB
PABPC3	12625-2-AP	Rabbit Poly	ELISA, IHC, IP, WB
PABPC4	14960-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
PAIP2	15583-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
PAPOLB	12821-1-AP	Rabbit Poly	ELISA, WB
PAPOLG	24284-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
PARN	13799-1-AP	Rabbit Poly	ELISA, IHC, WB
PCF11	23540-1-AP	Rabbit Poly	ELISA, WB
PLRG1	11914-1-AP	Rabbit Poly	ELISA, IP, WB
POP4	15273-1-AP	Rabbit Poly	ELISA, IF, WB
PPAN	 11006-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
PPP1CB	55136-1-AP	Rabbit Poly	ELISA, IF, WB
PPP1CB-specific	 10140-2-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
PPP1CC	 11082-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
PPP1CC	 55150-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
PPP1R8	16115-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
PPWD1	17106-1-AP	Rabbit Poly	ELISA, WB
PRPF19	15414-1-AP	Rabbit Poly	ELISA, WB
PRPF3	 10106-1-AP	Rabbit Poly	ELISA, IP, WB
PRPF39	24480-1-AP	Rabbit Poly	ELISA, IHC, WB

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More validation images available on our website.



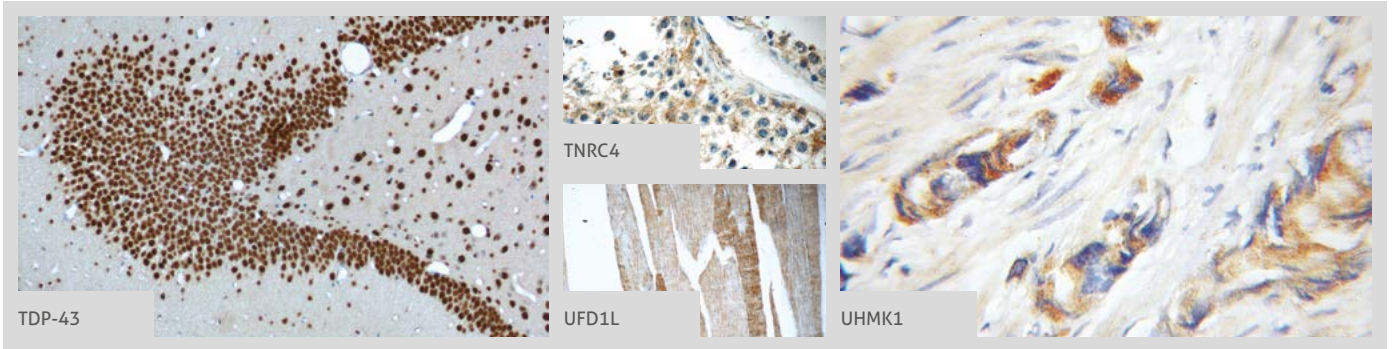
Antibody Name	Cat. No.	Type	Applications
PRPF4	2 10728-1-AP	Rabbit Poly	ELISA, IHC, WB
PRPF6	23929-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
PRPF8	3 11171-1-AP	Rabbit Poly	ELISA, IP, WB
PTBP1	4 12582-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
PTBP1	55181-1-AP	Rabbit Poly	ELISA, IF, WB
PTBP2	55186-1-AP	Rabbit Poly	ELISA, WB
PUF60	10810-1-AP	Rabbit Poly	ELISA, IHC, WB
RALYL	17179-1-AP	Rabbit Poly	ELISA, IHC, WB
RBBP6	11882-1-AP	Rabbit Poly	ELISA, IF, WB
RBM12B	17137-1-AP	Rabbit Poly	ELISA, WB
RBM14	10196-1-AP	Rabbit Poly	ELISA, WB
RBM16	18893-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
RBM17	13918-1-AP	Rabbit Poly	ELISA, IF, WB
RBM17	15374-1-AP	Rabbit Poly	ELISA, IP, WB
RBM19	19095-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
RBM25	25297-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
RBM39	21339-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
RBM8A (Y14)	14958-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
RBMX2	17994-1-AP	Rabbit Poly	ELISA, IF, WB
RCL1	15330-1-AP	Rabbit Poly	ELISA, IF, WB
RNGTT	12430-1-AP	Rabbit Poly	ELISA, IP, WB
RNMT	13743-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
RNPS1	10555-1-AP	Rabbit Poly	ELISA, IF, IP, WB
ROD1	14027-1-AP	Rabbit Poly	ELISA, IHC, WB
RPL24	17082-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
RPP25	15461-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
RSRC1	23826-1-AP	Rabbit Poly	ELISA, IHC, WB
RtcB-Specific	19809-1-AP	Rabbit Poly	ELISA, IF, IP, WB
RTCD1	15996-1-AP	Rabbit Poly	ELISA, WB
SART1	22675-1-AP	Rabbit Poly	ELISA, IF, IP, WB
SART3	18025-1-AP	Rabbit Poly	ELISA, IHC, IP, WB

Antibody Name	Cat. No.	Type	Applications
SF3A1	15858-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SF3A2	15596-1-AP	Rabbit Poly	ELISA, IHC, WB
SF3A3	12070-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SF3B14	12379-1-AP	Rabbit Poly	ELISA, WB
SF3B3	4 14577-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SF3B4	10482-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
SFPQ	2 15585-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
SFRS14	12514-1-AP	Rabbit Poly	ELISA, IHC, WB
SFRS17A	13441-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SFRS2	20371-1-AP	Rabbit Poly	ELISA, IP, WB
SFRS6	11772-1-AP	Rabbit Poly	ELISA, WB
SFRS7	11044-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
SFRS8	24705-1-AP	Rabbit Poly	ELISA, WB
SFRS9	17926-1-AP	Rabbit Poly	ELISA, WB
SIP1	21672-1-AP	Rabbit Poly	ELISA, IP, WB
SLTM	17889-1-AP	Rabbit Poly	ELISA, IF, WB
SLU7	12050-1-AP	Rabbit Poly	ELISA, IHC, WB
SMN	7 11708-1-AP	Rabbit Poly	ECLIA, ELISA, IF, IHC, IP, WB
SMN2	20451-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SMN2	22329-1-AP	Rabbit Poly	ELISA, IF, WB
SMN2 (Human, Mouse, Rat)	60154-2-Ig	Mouse Mono	ELISA, WB
SMN2 (Human-Specific)	60154-1-Ig	Mouse Mono	ELISA, IF, IHC, IP, WB
SMNDC1	12178-1-AP	Rabbit Poly	ELISA, IHC, WB
SMN-Exon7	60255-1-Ig	Mouse Mono	ELISA, IF, WB
SNRNP200	23875-1-AP	Rabbit Poly	ELISA, IP, WB
SNRPA	10212-1-AP	Rabbit Poly	ELISA, IHC, WB
SNRPA1	17368-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SNRPB	16807-1-AP	Rabbit Poly	ELISA, IHC, WB
SNRPB2	4 13512-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
SNRPD1	10352-1-AP	Rabbit Poly	ELISA, WB



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SNRPD2
→ ZCRB1

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Antibody Name	Cat. No.	Type	Applications
SNRPD2	14789-1-AP	Rabbit Poly	ELISA, IHC, WB
SNRPD2	66111-1-Ig	Mouse Mono	ELISA, WB
SNRPD3	10379-1-AP	Rabbit Poly	ELISA, IHC, WB
SNRPE	20407-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
SNRPF	14977-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, WB
SNRPG	15084-1-AP	Rabbit Poly	ELISA, IHC, WB
SNRPN	11070-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
SPI1	2 55100-1-AP	Rabbit Poly	ELISA, IF, WB
SR140	21399-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
SRp20	10916-1-AP	Rabbit Poly	ELISA
SRRM1	12822-1-AP	Rabbit Poly	ELISA, IP, WB
SYNCRIP	14024-1-AP	Rabbit Poly	ELISA, IP, WB
TDP-43	 758 10782-2-AP	Rabbit Poly	ChIP, CoIP, ELISA, FC, IF, IHC, IP, RIP, WB
TDP-43	50 12892-1-AP	Rabbit Poly	ChIP, ELISA, IF, IHC, IP, WB
TDP-43	18280-1-AP	Rabbit Poly	ELISA, FC, IF, IHC, IP, WB
TDP-43	36 60019-2-Ig	Mouse Mono	ELISA, FC, IF, IHC, IP, WB
pTDP-43 (403/404)	66079-1-Ig	Mouse Mono	ELISA, IF, WB
pTDP-43 (409/410)	5 22309-1-AP	Rabbit Poly	ELISA, IF, IHC, WB
TFIP11	14436-1-AP	Rabbit Poly	ELISA, IF, WB
TFIP11	66114-1-Ig	Mouse Mono	ELISA, IF, IHC, WB
TIA1	5 12133-2-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
TNRC4	 25353-1-AP	Rabbit Poly	ELISA, IHC, WB
TRA2A	12079-1-AP	Rabbit Poly	ELISA, WB
TRA2B	23832-1-AP	Rabbit Poly	ELISA, WB
TRNAU1AP (SECP43)	15053-1-AP	Rabbit Poly	ELISA, IHC, WB
TSEN2	2 13103-2-AP	Rabbit Poly	ELISA, WB
TTF2	13722-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
TXNL4B	12927-1-AP	Rabbit Poly	ELISA, WB
U2AF35	5 10334-1-AP	Rabbit Poly	ELISA, IHC, WB

Antibody Name	Cat. No.	Type	Applications
U2AF35	60289-1-Ig	Mouse Mono	ELISA, IHC, IP, WB
U2AF65	15624-1-AP	Rabbit Poly	ELISA, IHC, WB
UFD1L	 3 10615-1-AP	Rabbit Poly	ELISA, IF, IHC, IP, WB
UHMK1	 11624-1-AP	Rabbit Poly	ELISA, IHC, IP, WB
USP39	3 23865-1-AP	Rabbit Poly	ELISA, IF, IP, WB
WTAP	10200-1-AP	Rabbit Poly	ELISA, IF, IP, WB
WTAP	3 60188-1-Ig	Mouse Mono	ELISA, IF, IHC, WB (siRNA), WB
XAB2	10637-1-AP	Rabbit Poly	ELISA, IP, WB
XBP1	24168-1-AP	Rabbit Poly	ELISA, IHC, WB
YTHDC1	14392-1-AP	Rabbit Poly	ELISA, WB
ZCRB1	25629-1-AP	Rabbit Poly	ELISA, IF, WB

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