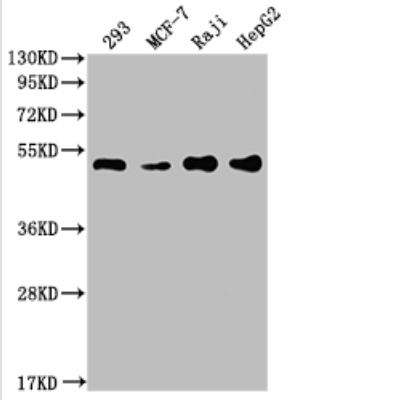
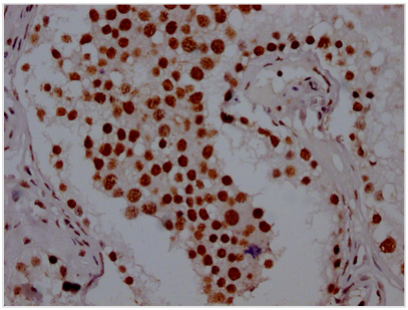
PABPN1 Recombinant Monoclonal Antibody

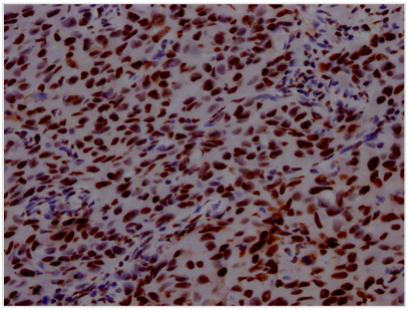
Product Code	CSB-RA569290A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q86U42
Immunogen	A synthesized peptide derived from human PABPN1
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IF, FC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200, FC:1:20-1:200
Relevance	Involved in the 3'-end formation of mRNA precursors (pre-mRNA) by the addition of a poly(A) tail of 200-250 nt to the upstream cleavage product (By similarity). Stimulates poly(A) polymerase (PAPOLA) conferring processivity on the poly(A) tail elongation reaction and controls also the poly(A) tail length (By similarity). Increases the affinity of poly(A) polymerase for RNA (By similarity). Is also present at various stages of mRNA metabolism including nucleocytoplasmic trafficking and nonsense-mediated decay (NMD) of mRNA. Cooperates with SKIP to synergistically activate E-box-mediated transcription through MYOD1 and may regulate the expression of muscle-specific genes (PubMed:11371506). Binds to poly(A) and to poly(G) with high affinity (By similarity). May protect the poly(A) tail from degradation (By similarity).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling
Gene Names	PABPN1
Clone No.	6C3
Image	



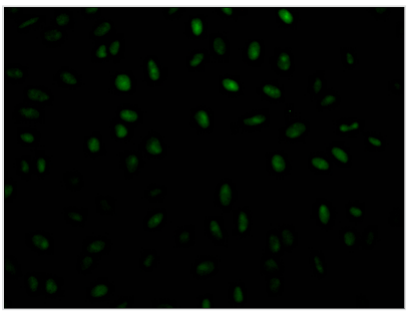
Western Blot
Positive WB detected in: 293 whole cell lysate, MCF-7 whole cell lysate, Raji whole cell lysate, HepG2 whole cell lysate
All lanes: PABPN1 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 33, 32, 38 kDa
Observed band size: 50 kDa



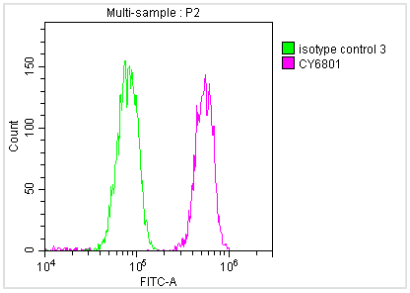
IHC image of CSB-RA569290A0HU diluted at 1:100 and staining in paraffin-embedded human testis tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA569290A0HU diluted at 1:100 and staining in paraffin-embedded human bladder cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunofluorescence staining of Hela Cells with CSB-RA569290A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Overlay histogram showing Hela cells stained with CSB-RA569290A0HU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then incubated in 10% normal goat serum to block non-specific protein-protein interactions followedby the antibody (1μg/1*10^6 cells) for 1 h at 4?.The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4?. Control antibody (green line) was Rabbit IgG (1μg/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

PABPN1 is a multifactorial mRNA processing regulator that controls muscle wasting and atrophy. PABPN1 activates polydenylate polymerase and regulates the length of the poly(A) tail on RNA transcripts. PABPN1 influences mRNA levels and stability by regulating the usage of alternative polyadenylation sites. PABPN1 is also involved in the processing of long non-coding RNA and short nucleolar RNA, as well as nuclear surveillance, which results in RNA hyperadenylation and degradation. PABPN1 levels in humans are lowered from midlife onwards, particularly in skeletal muscles. Oculopharyngeal muscular dystrophy (OPMD), a late-onset myopathy, is caused by an expansion mutation in PABPN1. Reduced PABPN1 levels cause muscle wasting and atrophy.

The generation of the recombinant PABPN1 antibody includes obtaining the PABPN1 antibody gene, cloning the gene into a plasma vector, introducing the recombinant vector into mammalian cell lines, and achieving expression of adequate amounts of functional antibody. The recombinant PABPN1 antibody was purified using A synthesized peptide derived from human PABPN1. It is reactive with the PABPN1 protein from Human and is suitable for the use in the ELISA, WB, IHC, IF, FC.