abcam

Product datasheet

Anti-IGF2BP1/IMP1 antibody [EPR18791] ab184305

Recombinant RabMAb

8 References 8 Images

Overview

Product name	Anti-IGF2BP1/IMP1 antibody [EPR18791]
Description	Rabbit monoclonal [EPR18791] to IGF2BP1/IMP1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, IP
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK-293, HeLa and K562 whole cell lysates; Human fetal liver and fetal kidney tissue lysates. IP: K562 whole cell lysate. IHC-P: Human testis, tonsil, Hodgkin's lymphoma and lung cancer tissues.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18791

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab184305 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 64 kDa (predicted molecular weight: 63 kDa).
IHC-P		1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		1/30.

Target

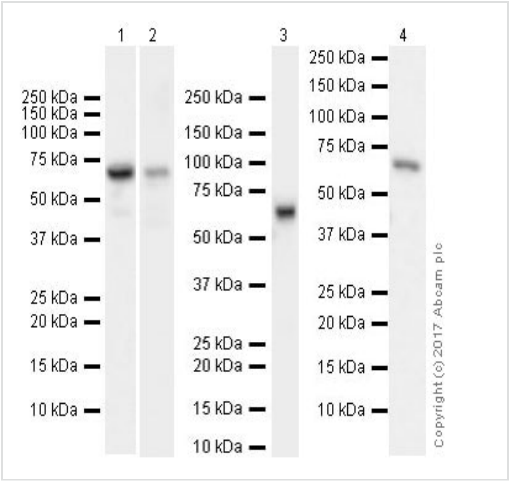
Function RNA-binding factor that affects mRNA nuclear export, localization, stability and translation. Component of the CRD-mediated complex that promotes MYC mRNA stabilization. Regulates mRNA stability during the integrated cellular stress response (ISR) in stress granules (SGs). Stabilizes the BTRC/FBW1A mRNA from degradation by disrupting miRNA-dependent interaction with AGO2. Identified in a HCV IRES-mediated translation complex, that enhances translation at the Hepatitis C virus (HCV) RNA-replicon via the internal ribosome entry site (IRES), but does not affect 5'cap-dependent translation. Acts as a HIV-1 retrovirus restriction factor that reduces HIV-1 assembly by inhibiting viral RNA packaging, assembly and processing of HIV-1 GAG protein on cellular membranes. Binds to mRNAs in stress granules (SGs). Binds to the stem-loop IV of the 5'-UTR and to the variable region and the poly(U-C) motif of the 3'-UTR of the HCV RNA-replicon. Binds to the 5'-UTR of the insulin-like growth factor 2 (IGF2) mRNA and regulates its subcellular localization and translation. Binds both to the coding region mRNA stability determinant (CRD) and to AU-rich sequences in the 3'-UTR of the MYC and CD44 mRNAs and stabilizes these mRNAs. Binds to the fourth and fifth exons of the oncofetal H19 and neuron-specific TAU mRNAs and regulates their localizations. Binds to the adenine-rich autoregulatory sequence (ARS) 5'-UTR of the PABPC1 mRNA and is involved in its translational repression. The RNA-binding activity to ARS is stimulated by PABPC1. Binds to the coding sequence region of BTRC/FBW1A mRNA and mediates stabilization of BTRC/FBW1A and MYC mRNAs in response to beta-catenin signaling. Binding to RNA employs a cooperative, sequential mechanism of homo- or heterodimerisation. Also involved in growth or survival of lung-cancer cells. Protects the MYC and MDR-1 mRNAs from cleavage by a endoribonuclease, thus prolonging their stabilities (By similarity). Binds to the 3'-UTR axonal localization signal (ALS) of TAU mRNA (By similarity). Binds to a conserved 54-nucleotide element in the 3'-UTR of the beta actin mRNA known as the 'zipcode' (By similarity). Promotes translocation of the beta-actin mRNA to dendrites (By similarity). May act as a regulator of mRNA transport to activated synapses in response to synaptic activity.

Tissue specificity Expressed in fetal liver, fetal lung, fetal kidney, fetal thymus, fetal placenta, fetal follicles of ovary, gonocytes of testis, oocytes, spermatogonia and semen (at protein level). Expressed in testicular and lung cancer (at protein level). Expressed in kidney, prostate, trachea, testis and lung cancer.

Sequence similarities Belongs to the RRM IMP/VICKZ family.

	Contains 4 KH domains. Contains 2 RRM (RNA recognition motif) domains.
Domain	The third and fourth KH domains encompass the protein dimerization motif and are necessary and sufficient for RNA binding. The four KH domains are important for granule formation and SGs targeting. Contains two nuclear export signals, situated within the second and fourth KH domains. The four KH domains are important to suppress HIV-1 infectivity.
Post-translational modifications	Phosphorylated. Phosphorylation may influence mRNA translation.
Cellular localization	Nucleus. Cytoplasm. Cell projection > lamellipodium. Cell projection > dendrite. Cell projection > dendritic spine. Localized in cytoplasmic mRNP granules containing untranslated mRNAs. Targeted to stress granules (SGs), but not processing bodies (PBs), during cellular stress. Colocalizes with G3BP1 and TIAL1 in SGs. Colocalizes with HIV-1 GAG at the cell edges. Found in lamellipodia of the leading edge, in the perinuclear region, and beneath the plasma membrane. The subcytoplasmic localization is cell specific and regulated by cell contact and growth. Colocalized with H19 RNA at lamellipodia. Colocalized with CD44 mRNA in RNP granules. Nuclear export is mediated by XPO1/CRM1. In motile cells, is transported towards the leading edge into the cortical region of the lamellipodia where it is connected to microfilaments (By similarity). Present in the form of granules and into F-actin-rich protrusion of dendrites, spines and subsynaptic sites (By similarity). Colocalizes with beta-actin mRNA in dendrites and spines (By similarity). Exhibited rapid, bidirectional movements in dendrites and spines (By similarity). Neuronal depolarization by KCl induces its rapid efflux from the cell body into dendrites.

Images



Western blot - Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

Lane 1 : Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305) at 1/5000 dilution
Lanes 2-4 : Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305) at 1/1000 dilution

Lane 1 : HEK-293 (human epithelial cell line from embryonic kidney) whole cell lysate
Lane 2 : Human fetal liver tissue lysate
Lane 3 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 4 : Human fetal kidney tissue lysate

Lysates/proteins at 10 µg per lane.

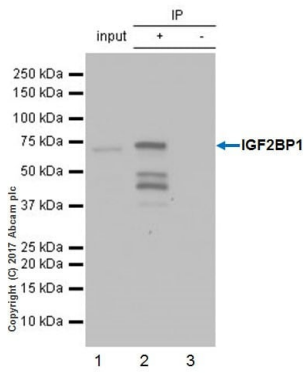
Secondary
Lanes 1-3 : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution
Lane 4 : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 63 kDa
Observed band size: 64 kDa

Exposure times: Lane 1: 8 seconds; Lanes 2,3: 15 seconds; Lane 4: 3 minutes.

Blocking/Dilution buffer: 5% NFDM/TBST.



Immunoprecipitation - Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

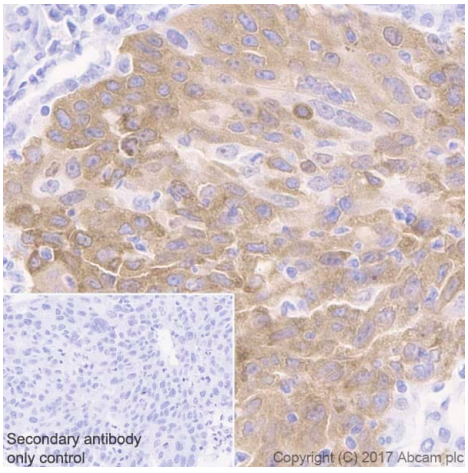
IGF2BP1/IMP1 was immunoprecipitated from 0.35 mg of K562 (human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate with ab184305 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab184305 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10,000 dilution.

Lane 1: K562 whole cell lysate 10 µg (Input).
Lane 2: ab184305 IP in K562 whole cell lysate.
Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab184305 in K562 whole cell lysate.

Exposure time: 1 second.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Faint, lower molecular mass bands are observed in some human cell lines including K562. These could be an isoform (Isoform 2 predicted to be 48.5kDa) and degradation products, as described in the literature (PMID: 11641779).

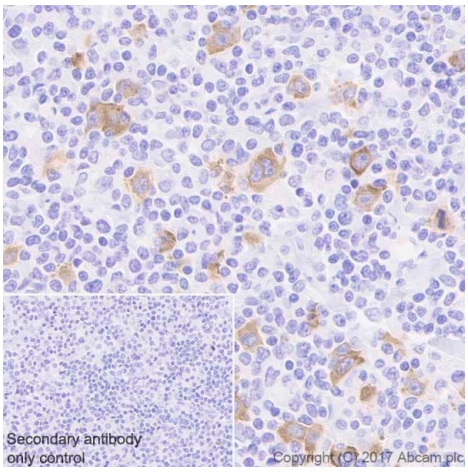


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue labeling IGF2BP1/IMP1 with ab184305 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in human lung cancer (PMID: 17255263) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

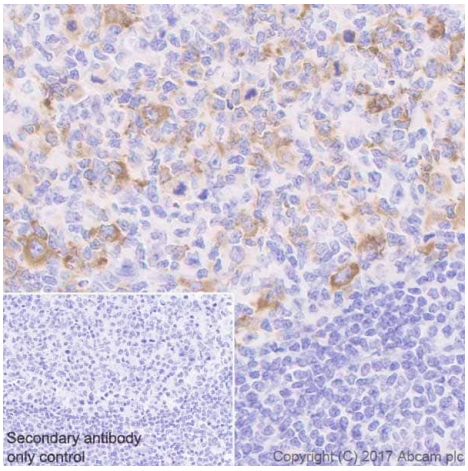


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

Immunohistochemical analysis of paraffin-embedded human Hodgkin's lymphoma tissue labeling IGF2BP1/IMP1 with ab184305 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Sporadic cytoplasmic staining in human Hodgkin’s lymphoma (PMID: 17296566) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

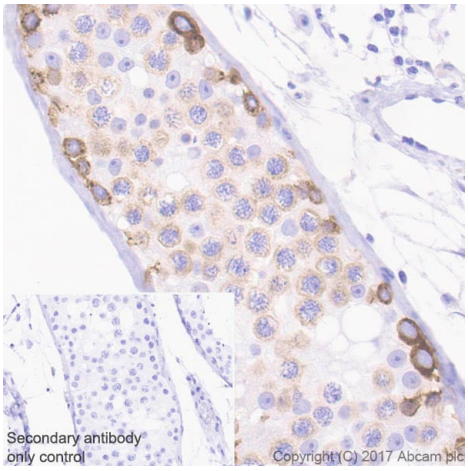


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling IGF2BP1/IMP1 with ab184305 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in germinal center of human tonsil (PMID: 17296566) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

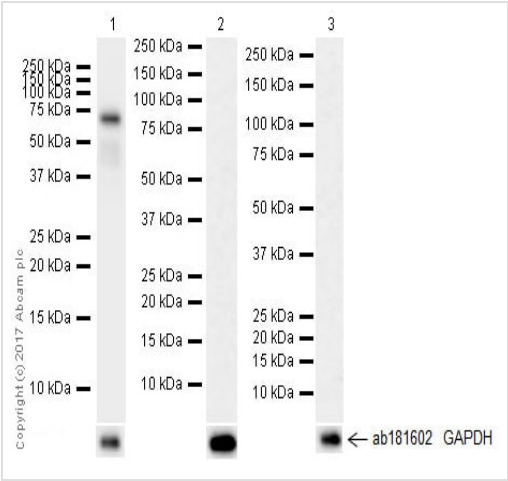


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

Immunohistochemical analysis of paraffin-embedded human testis tissue labeling IGF2BP1/IMP1 with ab184305 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in human testis (PMID: 16049158) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

Lane 1 : Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305) at 1/10000 dilution
Lanes 2-3 : Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305) at 1/1000 dilution

Lane 1 : K562 (human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate
Lane 2 : MCF7 (human breast adenocarcinoma cell line) whole cell lysate
Lane 3 : BxPC-3 (human pancreas adenocarcinoma cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

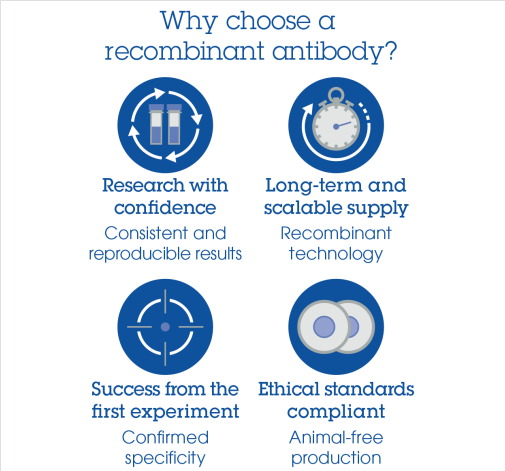
Developed using the ECL technique.

Predicted band size: 63 kDa
Observed band size: 64 kDa

Exposure times: Lane 1: 102 seconds; Lanes 2,3: 3 minutes.

Blocking/Dilution buffer: 5% NFDM/TBST.

Faint, lower molecular mass bands are observed in some human cell lines including K562. These could be an isoform (Isoform 2 predicted to be 48.5kDa) and degradation products, as described in the literature (PMID: 11641779). The BxPC-3 and MCF7 cell lines are negative controls (PMID 26917013).



Anti-IGF2BP1/IMP1 antibody [EPR18791] (ab184305)

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors