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CBP20 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP53309

Specification

CBP20 Antibody - Product Information

Application	**WB**
Primary Accession	P52298
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**18 KDa**
Antigen Region	**1-50**

CBP20 Antibody - Additional Information

Gene ID 22916

Other Names
Nuclear cap-binding protein subunit 2, 20 kDa nuclear cap-binding protein, Cell proliferation-inducing gene 55 protein, NCBP 20 kDa subunit, CBP20, NCBP-interacting protein 1, NIP1, NCBP2, CBP20

Dilution
WB~~ 1:1000

Format
Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol

Storage
Store at -20 °C.Stable for 12 months from date of receipt

CBP20 Antibody - Protein Information

Name NCBP2

Synonyms CBP20

Function
Component of the cap-binding complex (CBC), which binds co- transcriptionally to the 5' cap of pre-mRNAs and is involved in various processes such as pre-mRNA splicing, translation regulation, nonsense- mediated mRNA decay, RNA-mediated gene silencing (RNAi) by microRNAs (miRNAs) and mRNA export. The CBC complex is involved in mRNA export from the nucleus via its interaction with ALYREF/THOC4/ALY, leading to the recruitment of the mRNA export machinery to the 5' end of mRNA and to mRNA export in a 5' to 3' direction through the nuclear pore. The CBC complex is also involved in mediating U snRNA and intronless mRNAs export from the nucleus. The CBC complex is essential for a pioneer round of mRNA translation, before steady state translation

when the CBC complex is replaced by cytoplasmic cap-binding protein eIF4E. The pioneer round of mRNA translation mediated by the CBC complex plays a central role in nonsense-mediated mRNA decay (NMD), NMD only taking place in mRNAs bound to the CBC complex, but not on eIF4E-bound mRNAs. The CBC complex enhances NMD in mRNAs containing at least one exon- junction complex (EJC) via its interaction with UPF1, promoting the interaction between UPF1 and UPF2. The CBC complex is also involved in 'failsafe' NMD, which is independent of the EJC complex, while it does not participate in Staufen-mediated mRNA decay (SMD). During cell proliferation, the CBC complex is also involved in microRNAs (miRNAs) biogenesis via its interaction with SRRT/ARS2, thereby being required for miRNA-mediated RNA interference. The CBC complex also acts as a negative regulator of PARN, thereby acting as an inhibitor of mRNA deadenylation. In the CBC complex, NCBP2/CBP20 recognizes and binds capped RNAs (m7GpppG-capped RNA) but requires NCBP1/CBP80 to stabilize the movement of its N-terminal loop and lock the CBC into a high affinity cap-binding state with the cap structure. The conventional cap-binding complex with NCBP2 binds both small nuclear RNA (snRNA) and messenger (mRNA) and is involved in their export from the nucleus (PubMed:26382858).

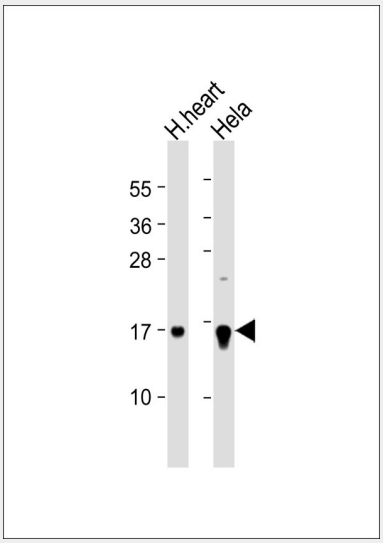
Cellular Location
Nucleus. Cytoplasm

CBP20 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CBP20 Antibody - Images



All lanes : Anti-CBP20 Antibody at 1:1000 dilution Lane 1: human heart lysate Lane 2: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase

conjugated at 1/10000 dilution. Predicted band size : 18 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

CBP20 Antibody - Background

Component of the cap-binding complex (CBC), which binds co-transcriptionally to the 5' cap of pre-mRNAs and is involved in various processes such as pre-mRNA splicing, translation regulation, nonsense-mediated mRNA decay, RNA-mediated gene silencing (RNAi) by microRNAs (miRNAs) and mRNA export. The CBC complex is involved in mRNA export from the nucleus via its interaction with ALYREF/THOC4/ALY, leading to the recruitment of the mRNA export machinery to the 5' end of mRNA and to mRNA export in a 5' to 3' direction through the nuclear pore. The CBC complex is also involved in mediating U snRNA and intronless mRNAs export from the nucleus. The CBC complex is essential for a pioneer round of mRNA translation, before steady state translation when the CBC complex is replaced by cytoplasmic cap-binding protein eIF4E. The pioneer round of mRNA translation mediated by the CBC complex plays a central role in nonsense-mediated mRNA decay (NMD), NMD only taking place in mRNAs bound to the CBC complex, but not on eIF4E-bound mRNAs. The CBC complex enhances NMD in mRNAs containing at least one exon-junction complex (EJC) via its interaction with UPF1, promoting the interaction between UPF1 and UPF2. The CBC complex is also involved in 'failsafe' NMD, which is independent of the EJC complex, while it does not participate in Staufen-mediated mRNA decay (SMD). During cell proliferation, the CBC complex is also involved in microRNAs (miRNAs) biogenesis via its interaction with SRRT/ARS2, thereby being required for miRNA- mediated RNA interference. The CBC complex also acts as a negative regulator of PARN, thereby acting as an inhibitor of mRNA deadenylation. In the CBC complex, NCBP2/CBP20 recognizes and binds capped RNAs (m7GpppG-capped RNA) but requires NCBP1/CBP80 to stabilize the movement of its N-terminal loop and lock the CBC into a high affinity cap-binding state with the cap structure.

CBP20 Antibody - References

Izaurralde E.,et al.Nature 376:709-712(1995).
Kataoka N.,et al.Nucleic Acids Res. 23:3638-3641(1995).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Kim J.W.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.