

**C1QBP Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP51024****Specification**

---

**C1QBP Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">O07021</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>31 KDa</b>
Antigen Region	<b>51 - 110</b>

**C1QBP Antibody - Additional Information****Gene ID** 708**Other Names**

Complement component 1 Q subcomponent-binding protein, mitochondrial, ASF/SF2-associated protein p32, Glycoprotein gC1qBP, C1qBP, Hyaluronan-binding protein 1, Mitochondrial matrix protein p32, gC1q-R protein, p33, C1QBP, GC1QBP, HABP1, SF2P32

**Target/Specificity**

KLH conjugated synthetic peptide derived from human C1QBP

**Dilution**

WB~~ 1:1000

**Format**

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

**Storage**

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

**C1QBP Antibody - Protein Information****Name** C1QBP**Synonyms** GC1QBP, HABP1, SF2P32**Function**

Multifunctional and multicompartamental protein involved in inflammation and infection processes, ribosome biogenesis, protein synthesis in mitochondria, regulation of apoptosis, transcriptional regulation and pre-mRNA splicing (PubMed: [10022843](http://www.uniprot.org/citations/10022843), PubMed: [10479529](http://www.uniprot.org/citations/10479529), PubMed: [10722602](http://www.uniprot.org/citations/10722602), PubMed: [11086025](http://www.uniprot.org/citations/11086025))

target="\_blank">11086025</a>, PubMed:<a href="http://www.uniprot.org/citations/11859136" target="\_blank">11859136</a>, PubMed:<a href="http://www.uniprot.org/citations/15243141" target="\_blank">15243141</a>, PubMed:<a href="http://www.uniprot.org/citations/16140380" target="\_blank">16140380</a>, PubMed:<a href="http://www.uniprot.org/citations/16177118" target="\_blank">16177118</a>, PubMed:<a href="http://www.uniprot.org/citations/17881511" target="\_blank">17881511</a>, PubMed:<a href="http://www.uniprot.org/citations/18676636" target="\_blank">18676636</a>, PubMed:<a href="http://www.uniprot.org/citations/19004836" target="\_blank">19004836</a>, PubMed:<a href="http://www.uniprot.org/citations/19164550" target="\_blank">19164550</a>, PubMed:<a href="http://www.uniprot.org/citations/20810993" target="\_blank">20810993</a>, PubMed:<a href="http://www.uniprot.org/citations/21536856" target="\_blank">21536856</a>, PubMed:<a href="http://www.uniprot.org/citations/21544310" target="\_blank">21544310</a>, PubMed:<a href="http://www.uniprot.org/citations/22700724" target="\_blank">22700724</a>, PubMed:<a href="http://www.uniprot.org/citations/28942965" target="\_blank">28942965</a>, PubMed:<a href="http://www.uniprot.org/citations/8662673" target="\_blank">8662673</a>, PubMed:<a href="http://www.uniprot.org/citations/8710908" target="\_blank">8710908</a>, PubMed:<a href="http://www.uniprot.org/citations/9461517" target="\_blank">9461517</a>). At the cell surface is thought to act as an endothelial receptor for plasma proteins of the complement and kallikrein-kinin cascades (PubMed:<a href="http://www.uniprot.org/citations/10479529" target="\_blank">10479529</a>, PubMed:<a href="http://www.uniprot.org/citations/11859136" target="\_blank">11859136</a>, PubMed:<a href="http://www.uniprot.org/citations/8662673" target="\_blank">8662673</a>, PubMed:<a href="http://www.uniprot.org/citations/8710908" target="\_blank">8710908</a>). Putative receptor for C1q; specifically binds to the globular 'heads' of C1q thus inhibiting C1; may perform the receptor function through a complex with C1qR/CD93 (PubMed:<a href="http://www.uniprot.org/citations/20810993" target="\_blank">20810993</a>, PubMed:<a href="http://www.uniprot.org/citations/8195709" target="\_blank">8195709</a>). In complex with cytokeratin-1/KRT1 is a high affinity receptor for kininogen-1/HMWK (PubMed:<a href="http://www.uniprot.org/citations/21544310" target="\_blank">21544310</a>). Can also bind other plasma proteins, such as coagulation factor XII leading to its autoactivation. May function to bind initially fluid kininogen-1 to the cell membrane. The secreted form may enhance both extrinsic and intrinsic coagulation pathways. It is postulated that the cell surface form requires docking with transmembrane proteins for downstream signaling which might be specific for a cell-type or response. By acting as C1q receptor is involved in chemotaxis of immature dendritic cells and neutrophils and is proposed to signal through CD209/DC-SIGN on immature dendritic cells, through integrin alpha-4/beta-1 during trophoblast invasion of the decidua, and through integrin beta-1 during endothelial cell adhesion and spreading (PubMed:<a href="http://www.uniprot.org/citations/16140380" target="\_blank">16140380</a>, PubMed:<a href="http://www.uniprot.org/citations/22700724" target="\_blank">22700724</a>, PubMed:<a href="http://www.uniprot.org/citations/9461517" target="\_blank">9461517</a>). Signaling involved in inhibition of innate immune response is implicating the PI3K-AKT/PKB pathway (PubMed:<a href="http://www.uniprot.org/citations/16177118" target="\_blank">16177118</a>). Required for protein synthesis in mitochondria (PubMed:<a href="http://www.uniprot.org/citations/28942965" target="\_blank">28942965</a>). In mitochondrial translation may be involved in formation of functional 55S mitoribosomes; the function seems to involve its RNA-binding activity (By similarity). May be involved in the nucleolar ribosome maturation process; the function may involve the exchange of FBL for RRP1 in the association with pre-ribosome particles (By similarity). Involved in regulation of RNA splicing by inhibiting the RNA-binding capacity of SRSF1 and its phosphorylation (PubMed:<a href="http://www.uniprot.org/citations/10022843" target="\_blank">10022843</a>, PubMed:<a href="http://www.uniprot.org/citations/21536856" target="\_blank">21536856</a>). Is required for the nuclear translocation of splicing factor U2AF1L4 (By similarity). Involved in regulation of CDKN2A- and HRK-mediated apoptosis. Stabilizes mitochondrial CDKN2A isoform smARF (PubMed:<a href="http://www.uniprot.org/citations/17486078" target="\_blank">17486078</a>). May be involved in regulation of FOXC1 transcriptional activity and NFY/CCAAT-binding factor complex-mediated transcription (PubMed:<a href="http://www.uniprot.org/citations/15243141" target="\_blank">15243141</a>, PubMed:<a href="http://www.uniprot.org/citations/18676636" target="\_blank">18676636</a>). May play a role in antibacterial defense as it can bind to cell

surface hyaluronan and inhibit *Streptococcus pneumoniae* hyaluronate lyase (PubMed:<a href="http://www.uniprot.org/citations/19004836" target="\_blank">19004836</a>). May be involved in modulation of the immune response; ligation by HCV core protein is resulting in suppression of interleukin-12 production in monocyte-derived dendritic cells (PubMed:<a href="http://www.uniprot.org/citations/11086025" target="\_blank">11086025</a>, PubMed:<a href="http://www.uniprot.org/citations/17881511" target="\_blank">17881511</a>). Involved in regulation of antiviral response by inhibiting RIGI- and IFIH1-mediated signaling pathways probably involving its association with MAVS after viral infection (PubMed:<a href="http://www.uniprot.org/citations/19164550" target="\_blank">19164550</a>). Acts as a regulator of DNA repair via homologous recombination by inhibiting the activity of MRE11: interacts with unphosphorylated MRE11 and RAD50 in absence of DNA damage, preventing formation and activity of the MRN complex. Following DNA damage, dissociates from phosphorylated MRE11, allowing formation of the MRN complex (PubMed:<a href="http://www.uniprot.org/citations/31353207" target="\_blank">31353207</a>).

#### **Cellular Location**

Mitochondrion matrix. Nucleus. Nucleus, nucleolus Cell membrane; Peripheral membrane protein; Extracellular side. Secreted. Cytoplasm. Note=Seems to be predominantly localized to mitochondria. Secreted by activated lymphocytes. Localizes to the nucleolus when coexpressed with POLGARF (PubMed:32958672). Interaction with POLGARF is likely to result in prevention of C1QBP maturation and redirection from mitochondria to nucleoli (PubMed:32958672)

#### **Tissue Location**

Expressed on cell surface of peripheral blood cells (at protein level); Surface expression is reported for macrophages and monocyte-derived dendritic cells.

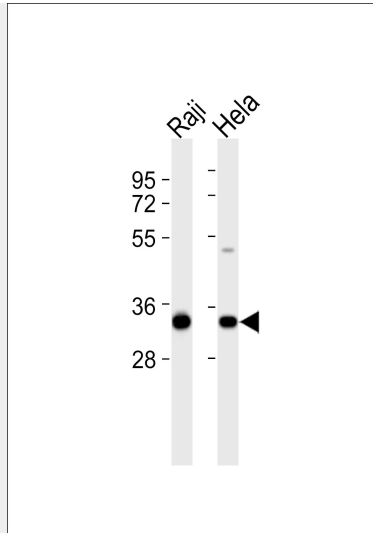
### **C1QBP Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **C1QBP Antibody - Images**





All lanes : Anti-C1QBP Antibody at 1:1000 dilution Lane 1: Raji whole cell lysates Lane 2: HeLa whole cell lysates Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 31 kDa Blocking/Dilution buffer: 5% NFDN/TBST.

### **C1QBP Antibody - Background**

Is believed to be a multifunctional and multicompartamental protein involved in inflammation and infection processes, ribosome biogenesis, regulation of apoptosis, transcriptional regulation and pre-mRNA splicing. At the cell surface is thought to act as an endothelial receptor for plasma proteins of the complement and kallikrein-kinin cascades. Putative receptor for C1q; specifically binds to the globular "heads" of C1q thus inhibiting C1; may perform the receptor function through a complex with C1qR/CD93. In complex with cytokeratin-1/KRT1 is a high affinity receptor for kininogen-1/HMWK. Can also bind other plasma proteins, such as coagulation factor XII leading to its autoactivation. May function to bind initially fluid kininogen-1 to the cell membrane. The secreted form may enhance both extrinsic and intrinsic coagulation pathways. It is postulated that the cell surface form requires docking with transmembrane proteins for downstream signaling which might be specific for a cell-type or response. By acting as C1q receptor is involved in chemotaxis of immature dendritic cells and neutrophils and is proposed to signal through CD209/DC-SIGN on immature dendritic cells, through integrin alpha-4/beta-1 during trophoblast invasion of the decidua, and through integrin beta-1 during endothelial cell adhesion and spreading. Signaling involved in inhibition of innate immune response is implicating the PI3K-AKT/PKB pathway. In mitochondrial translation may be involved in formation of functional 55S mitoribosomes; the function seems to involve its RNA-binding activity. May be involved in the nucleolar ribosome maturation process; the function may involve the exchange of FBL for RRP1 in the association with pre-ribosome particles. Involved in regulation of RNA splicing by inhibiting the RNA-binding capacity of SRSF1 and its phosphorylation. Is required for the nuclear translocation of splicing factor U2AF1L4. Involved in regulation of CDKN2A- and HRK-mediated apoptosis. Stabilizes mitochondrial CDKN2A isoform smARF. May be involved in regulation of FOXC1 transcriptional activity and NFY/CCAAT-binding factor complex-mediated transcription. In infection processes acts as an attachment site for microbial proteins, including *Listeria monocytogenes* internalin B and *Staphylococcus aureus* protein A. May play a role in antibacterial defense as it can bind to cell surface hyaluronan and inhibit *Streptococcus pneumoniae* hyaluronate lyase. Involved in replication of Rubella virus. May be involved in modulation of the immune response; ligation by HCV core protein is resulting in suppression of interleukin-12 production in monocyte-derived dendritic cells. Involved in regulation of antiviral response by inhibiting DDX58- and IFIH1- mediated signaling pathways probably involving its association with MAVS after viral infection. Involved in HIV-1 replication, presumably by contributing to splicing of viral RNA.

### **C1QBP Antibody - References**

Honore B.,et al.Gene 134:283-287(1993).

Ghebrehiwet B.,et al.J. Exp. Med. 179:1809-1821(1994).

Tye A.J.,et al.J. Biol. Chem. 276:17069-17075(2001).

Kalnine N.,et al.Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.

Krainer A.R.,et al.Cell 66:383-394(1991).