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# CIB1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP56425

## Product Information

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| **Application** | IHC-P, IHC-F, IF, E |
| **Primary Accession** | Q99828 |
| **Reactivity** | Rat, Pig, Dog, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 21703 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human CIB1 |
| **Epitope Specificity** | 101-191/191 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Membrane. Cytoplasm. Nucleus. Cell projection, filopodium. Apical cell membrane. Localizes to the perinuclear region in the presence of NBR1. Colocalizes with TAS1R2 in apical regions of taste receptor cells. |
| **SIMILARITY** | Contains 2 EF-hand domains. |
| **SUBUNIT** | Monomer. Interacts with the heterodimeric integrin alpha-IIb/beta3. Interacts with the protein kinases PLK2/SNK and with the region immediately upstream of the kinase domain of DNA-PK. Interacts with PLK3; leading to inhibit PLK3 kinase activity. Interacts with PSEN2. Interacts with MYO1C (By similarity). Interacts (via C-terminus) with F8. Interacts with NBR1 (via C-terminus). Interacts with FEZ1 (via C-terminus). Interacts with UBR5 (via C-terminus); the interaction is sensitive to DNA damage, and may target CIB1 for ubiquitin-mediated degradation. Interacts with IFI6. Interacts with BCL2. Interacts with TAS1R2 (via C-terminus); this interaction is independent of the myristoylation state of CIB1. Interacts with ITPR3; in a calcium dependent manner. Interacts with PTK2/FAK1. Interacts with MAP3K5; inhibiting MAP3K5 activation by phosphorylation, and its subsequent interaction with TRAF2. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | CIB1(Calcium and integrin binding 1) may convert the inactive conformation of integrin alpha-IIb/beta3 to an active form through the binding to the integrin cytoplasmic domain. |

## Additional Information

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| **Gene ID** | 10519 |
| **Other Names** | Calcium and integrin-binding protein 1, CIB, Calcium- and integrin-binding protein, CIBP, Calmyrin, DNA-PKcs-interacting protein, Kinase-interacting protein, KIP, SNK-interacting protein 2-28, SIP2-28, CIB1, CIB, KIP, PRKDCIP |

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| **Target/Specificity** | Ubiquitous. |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **Format** | 0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | CIB1 |
| **Synonyms** | CIB, KIP, PRKDCIP |
| **Function** | Calcium-binding protein that plays a role in the regulation of numerous cellular processes, such as cell differentiation, cell division, cell proliferation, cell migration, thrombosis, angiogenesis, cardiac hypertrophy and apoptosis. Involved in bone marrow megakaryocyte differentiation by negatively regulating thrombopoietin- mediated signaling pathway. Participates in the endomitotic cell cycle of megakaryocyte, a form of mitosis in which both karyokinesis and cytokinesis are interrupted. Plays a role in integrin signaling by negatively regulating alpha-IIb/beta3 activation in thrombin-stimulated megakaryocytes preventing platelet aggregation. Up-regulates PTK2/FAK1 activity, and is also needed for the recruitment of PTK2/FAK1 to focal adhesions; it thus appears to play an important role in focal adhesion formation. Positively regulates cell migration on fibronectin in a CDC42-dependent manner, the effect being negatively regulated by PAK1. Functions as a negative regulator of stress activated MAP kinase (MAPK) signaling pathways. Down-regulates inositol 1,4,5-trisphosphate receptor-dependent calcium signaling. Involved in sphingosine kinase SPHK1 translocation to the plasma membrane in a N-myristoylation- dependent manner preventing TNF-alpha-induced apoptosis. Regulates serine/threonine-protein kinase PLK3 activity for proper completion of cell division progression. Plays a role in microtubule (MT) dynamics during neuronal development; disrupts the MT depolymerization activity of STMN2 attenuating NGF-induced neurite outgrowth and the MT reorganization at the edge of lamellipodia. Promotes cardiomyocyte hypertrophy via activation of the calcineurin/NFAT signaling pathway. Stimulates calcineurin PPP3R1 activity by mediating its anchoring to the sarcolemma. In ischemia-induced (pathological or adaptive) angiogenesis, stimulates endothelial cell proliferation, migration and microvessel formation by activating the PAK1 and ERK1/ERK2 signaling pathway. Also promotes cancer cell survival and proliferation. May regulate cell cycle and differentiation of spermatogenic germ cells, and/or differentiation of supporting Sertoli cells. Forms a complex with TMC6/EVER1 and TMC8/EVER2 in lymphocytes and keratynocytes where CIB1 stabilizes TMC6 and TMC8 levels and reciprocally (PubMed:30068544, PubMed:32917726). |
| **Cellular Location** | Membrane; Lipid-anchor. Cell membrane, sarcolemma. Cell membrane. Apical cell membrane. Cell projection, ruffle membrane. Cell projection, filopodium tip. Cell projection, growth cone. Cell projection, lamellipodium. Cytoplasm. Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, perinuclear region. Nucleus. Cell projection, neuron projection. Perikaryon. Note=Colocalized with PPP3R1 at the cell membrane of cardiomyocytes in the hypertrophic heart (By similarity) Colocalized with NBR1 to the perinuclear region. Colocalizes with TAS1R2 in |

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| | apical regions of taste receptor cells. Colocalized with RAC3 in the perinuclear area and at the cell periphery. Colocalized with PAK1 within membrane ruffles during cell spreading upon readhesion to fibronectin. Redistributed to the cytoskeleton upon platelet aggregation. Translocates from the cytosol to the plasma membrane in a calcium-dependent manner. Colocalized with PLK3 at centrosomes in ductal breast carcinoma cells. |
| **Tissue Location** | Ubiquitously expressed. Expressed in the epidermis, hair follicles and keratinocytes (PubMed:30068544). Detected in platelets and in cell lines of megakaryocytic and erythrocytic lineages. Both isoform 1 and isoform 2 are detected in various cancer cell lines, with isoform 2 being the predominant form (at protein level). |