

CIB (G-5): sc-271490

BACKGROUND

Platelets regulate the function of Integrin $\alpha 2b/\beta 3$ (GPIIb/IIIa), the platelet Fibrinogen receptor, which is involved in the binding of proteins to integrin cytoplasmic domains. A novel protein, CIB, for calcium- and integrin-binding protein (also designated as Kip for kinase interacting protein, SIP2-28 and DNA-PK_{CS} interacting protein), binds specifically at the cytoplasmic domain of $\alpha 2b$ by a number of positively charged residues in its binding site. Binding of CIB to the $\alpha 2b$ is affected by fluctuations in the intracellular calcium concentration. In aggregated platelets, endogenous CIB and $\alpha 2b/\beta 3$ translocate to the Triton X-100-insoluble cytoskeleton, demonstrating that the cellular localization of CIB is regulated. CIB also binds to DNA-PK_{CS}, which is a nuclear protein serine/threonine kinase that plays a role in the DNA repair and recombination process of lymphoid development. Fnk also binds to the CIB, suggesting that CIB may be a regulatory subunit of polo-like kinases. CIB shows significant homology to calcineurin B and calmodulin, and its mRNA levels are ubiquitously expressed in various human tissues.

REFERENCES

- Naik, U.P., et al. 1997. Identification of a novel calcium-binding protein that interacts with the Integrin $\alpha 2b$ cytoplasmic domain. *J. Biol. Chem.* 272: 4651-4654.
- Wu, X. and Lieber, M.R. 1997. Interaction between DNA-dependent protein kinase and a novel protein, Kip. *Mutat. Res.* 385: 13-20.
- Shock, D.D., et al. 1999. Calcium-dependent properties of CIB binding to the Integrin $\alpha 2b$ cytoplasmic domain and translocation to the platelet cytoskeleton. *Biochem. J.* 342: 729-735.
- Seki, N., et al. 1999. Structure, expression profile and chromosomal location of an isolog of DNA-PK_{CS} interacting protein (Kip) gene. *Biochim. Biophys. Acta* 1444: 143-147.

CHROMOSOMAL LOCATION

Genetic locus: CIB1 (human) mapping to 15q26.1; Cib1 (mouse) mapping to 7 D3.

SOURCE

CIB (G-5) is a mouse monoclonal antibody raised against amino acids 77-191 mapping at the C-terminus of CIB of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CIB (G-5) is available conjugated to agarose (sc-271490 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271490 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271490 PE), fluorescein (sc-271490 FITC), Alexa Fluor[®] 488 (sc-271490 AF488), Alexa Fluor[®] 546 (sc-271490 AF546), Alexa Fluor[®] 594 (sc-271490 AF594) or Alexa Fluor[®] 647 (sc-271490 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271490 AF680) or Alexa Fluor[®] 790 (sc-271490 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CIB (G-5) is recommended for detection of CIB of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CIB siRNA (h): sc-43271, CIB siRNA (m): sc-43272, CIB shRNA Plasmid (h): sc-43271-SH, CIB shRNA Plasmid (m): sc-43272-SH, CIB shRNA (h) Lentiviral Particles: sc-43271-V and CIB shRNA (m) Lentiviral Particles: sc-43272-V.

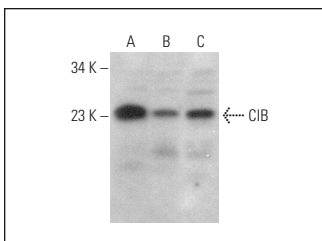
Molecular Weight of CIB: 24 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, A549 cell lysate: sc-2413 or T-47D cell lysate: sc-2293.

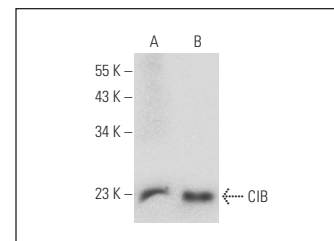
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



CIB (G-5): sc-271490. Western blot analysis of CIB expression in T-47D (A), A549 (B) and F9 (C) whole cell lysates.



CIB (G-5): sc-271490. Western blot analysis of CIB expression in K-562 (A) and T47D (B) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.