

PACT (m): 293T Lysate: sc-127290

BACKGROUND

Interferon-inducible double stranded RNA-dependent protein kinase activator, also designated PKR-associated protein X (RAX) or PACT, acts as a protein activator of PKR. Following stress such as serum starvation or peroxide or arsenite treatment, PACT associates with and activates PKR, resulting in eIF2 α activation (phosphorylation), consequent translation inhibition and apoptosis. PACT can directly interact with double stranded RNA (dsRNA), however, eIF2 α activation occurs only in the absence of dsRNA. The presence of certain growth factors may suppress the pro-apoptotic function of PACT. In both human and mouse cells, PACT is phosphorylated on Serine 18, and the phosphorylated form activates PKR following stress. PACT may exist as a heterodimer with eIF2 α , interacting through its DRBM domain.

REFERENCES

1. Patel, R.C., et al. 1998. PACT, a protein activator of the interferon-induced protein kinase, PKR. *EMBO J.* 17: 4379-4390.
2. Ito, T., et al. 1999. RAX, a cellular activator for double-stranded RNA-dependent protein kinase during stress signaling. *J. Biol. Chem.* 274: 15427-15432.
3. Huang, X., et al. 2002. The C-terminal, third conserved motif of the protein activator PACT plays an essential role in the activation of double stranded RNA-dependent protein kinase (PKR). *Biochem. J.* 366: 175-186.
4. Peters, G.A., et al. 2002. Inhibition of PACT-mediated activation of PKR by the herpes simplex virus type 1 Us11 protein. *J. Virol.* 76: 11054-11064.
5. Yang, M., et al. 2003. A novel role for RAX, the cellular activator of PKR, in synergistically stimulating SV40 large T antigen-dependent gene expression. *J. Biol. Chem.* 278: 38325-38332.
6. Bennett, R.L., et al. 2004. Serine 18 phosphorylation of RAX, the PKR activator, is required for PKR activation and consequent translation inhibition. *J. Biol. Chem.* 279: 42687-42693.

CHROMOSOMAL LOCATION

Genetic locus: Prkra (mouse) mapping to 2 C3.

PRODUCT

PACT (m): 293T Lysate represents a lysate of mouse PACT transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

PACT (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PACT antibodies. Recommended use: 10-20 μ l per lane.

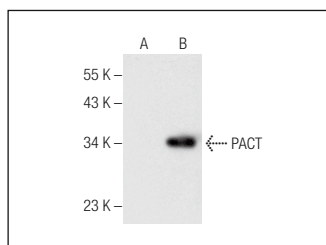
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PACT (D-4): sc-377103 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PACT expression in PACT transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



PACT (D-4): sc-377103. Western blot analysis of PACT expression in non-transfected: sc-117752 (A) and mouse PACT transfected: sc-127290 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.