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 eIF2β activation (phosphorylation), consequent translation inhibition and apoptosis. PACT can directly interact with double stranded RNA (dsRNA), however, eIF2β 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 eIF2β, interacting through its DRBM domain.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: PRKRA (human) mapping to 2q31.2; Prkra (mouse) mapping to 2 C3.

SOURCE

PACT (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 137-173 within an internal region of PACT of human origin.

PRODUCT

Each vial contains 200 µg IgG2a in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377103 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

See our website at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

PACT (D-4) is recommended for detection of PACT of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

PACT (D-4) is also recommended for detection of PACT in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PACT siRNA (h): sc-36175, PACT siRNA (m2): sc-63342, PACT shRNA Plasmid (h): sc-36175-SH, PACT shRNA Plasmid (m2): sc-63342-SH, PACT shRNA (h) Lentiviral Particles: sc-36175-V and PACT shRNA (m2) Lentiviral Particles: sc-63342-V.

Molecular Weight of PACT: 34 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, MOLT-4 cell lysate: sc-2233 or HL-60 whole cell lysate: sc-2208.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-ITC: sc-2010 (dilution range: 1:30-1:3000) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA

SELECT PRODUCT CITATIONS


RESEARCH USE

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