Human PACT Alexa Fluor® Plus 647-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF1980AFP647

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PACT in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human PACT Ser2-Lys313 Accession # O75569
Conjugate	Alexa Fluor Plus 647 Excitation Wavelength: 658 nm Emission Wavelength: 675 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

DATA

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PACT (PKR Activator; also HSD14, PRKRA and RAX [in mouse]) is a 34-37 kDa member of the PRKRA family of molecules. It is a ubiquitously expressed, cytoplasmic, 313 amino acid (aa) protein that contains three discrete double-stranded (ds) RNA binding motifs (aa 31-101; 126-194; 240-308). It exists as a monomer, homodimer, and heterodimer with at least two partners, TRBP and Dicer. Two isoform variants are known to exist, including one that utilizes an alternative start site at Met26, and another that shows a 10 aa substitution for aa 1-21. PACT is perhaps best known for its relationship with PKR, a 52-58 kDa Ser/Thr kinase that downmodulates protein synthesis and initiates apoptosis. PKR is constitutively silent, and activated via two principal ways; the first is through binding to (viral) dsRNA, and the second is through binding to an activator, PACT. PACT is kept in check upstream through dimerization with at 48-49 kDa regulatory protein termed TRBP. Following growth factor withdrawl or exposure to bacterial products such as LPS, PACT is phosphorylated at Ser287, and this inactive PACT:TRBP heterodimer dissociates, freeing up PACT to bind to PKR. PACT's interaction with PKR induces an autophosphorylation event on PKR. This allows for an activated PKR interaction with eIF2a, causing its phosphorylation and a subsequent reduction of protein synthesis. PACT may also act independently of PKR, and serve as a component of RISC, a complex that downregulates mRNA translation. Within this complex, PACT likely associates with Dicer in concert with Argonaute. Full-length PACT shares 98% aa sequence identity with the mouse ortholog to human PACT termed RAX.

PRODUCT SPECIFIC NOTICES

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