

PEA-15 (K-16): sc-5846

BACKGROUND

PEA-15 (phosphoprotein enriched in astrocytes) exists in a non-phosphorylated form (N), and two phosphorylated forms, Pa and Pb. PEA-15 is an endogenous substrate for PKC, which mediates the transition from Pa to Pb. The level of PEA-15 phosphorylation changes upon depolymerization or stabilization of tubulins, indicating that PEA-15 co-localizes with microtubules. The first 80 amino acids of PEA-15 correspond to the death effector domain (DED), which is a domain found in proteins that regulate apoptotic signaling pathways. The DED domain is necessary for PEA-15 to block Ras suppression. Although PEA-15 is predominantly expressed in the central nervous system, low levels of PEA-15 are expressed in liver and kidney, and higher levels in muscle. PEA-15 is also referred to as PED, phosphoprotein enriched in diabetes, for its elevated expression in type 2 diabetic patients.

REFERENCES

1. Araujo, H., et al. 1993. Characterization of PEA-15, a major substrate for protein kinase C in astrocytes. *J. Biol. Chem.* 268: 5911-5920.
2. Danzinger, N., et al. 1995. Cellular expression, developmental regulation, and phylogenetic conservation of PEA-15, the astrocytic major phosphoprotein and protein kinase C substrate. *J. Neurochem.* 64: 1016-1025.
3. Chinnaiyan, A., et al. 1995. FADD, a novel death domain-containing protein, interacts with the death domain of FAS and initiates apoptosis. *Cell* 81: 505-512.
4. Estelles, A., et al. 1996. The major astrocytic phosphoprotein PEA-15 is encoded by two mRNAs conserved on their full length in mouse and human. *J. Biol. Chem.* 271: 14800-14806.
5. Ramos, J., et al. 1998. The death effector domain of PEA-15 is involved in its regulation of integrin activation. *J. Biol. Chem.* 273: 33897-33900.
6. Condorelli, G., et al. 1998. PED/PEA-15 gene controls glucose transport and is overexpressed in type 2 diabetes mellitus. *EMBO J.* 17: 3858-3866.

CHROMOSOMAL LOCATION

Genetic locus: PEA-15 (human) mapping to 1q21.1; Pea-15 (mouse) mapping to 1 H3.

SOURCE

PEA-15 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PEA-15 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5846 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.

APPLICATIONS

PEA-15 (K-16) is recommended for detection of PEA-15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

PEA-15 (K-16) is also recommended for detection of PEA-15 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PEA-15 siRNA (h): sc-37485, PEA-15 siRNA (m): sc-37486, PEA-15 shRNA Plasmid (h): sc-37485-SH, PEA-15 shRNA Plasmid (m): sc-37486-SH, PEA-15 shRNA (h) Lentiviral Particles: sc-37485-V and PEA-15 shRNA (m) Lentiviral Particles: sc-37486-V.

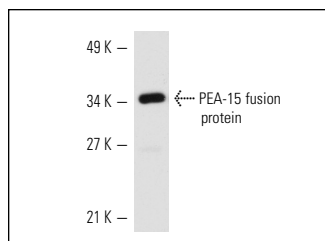
Molecular Weight of PEA-15: 15 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PEA-15 (K-16): sc-5846. Western blot analysis of human recombinant PEA-15 fusion protein.

RESEARCH USE

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

MONOS
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Try **PEA-15 (H-3): sc-166678**, our highly recommended monoclonal alternative to PEA-15 (K-16).