

DAP-5 (K-15): sc-31677

BACKGROUND

Death-associated protein 5 (DAP-5) (also known as p97 and NAT1) is a member of the eukaryotic translation initiation factor 4G (eIF4G) family. DAP-5 is ubiquitously expressed and is highly conserved among species. In response to activated FAS or p53, caspase cleaves DAP-5 at position 790 to yield a C-terminal truncated protein which is capable of forming complexes with eIF4A and eIF3. DAP-5 has homology to the carboxy-terminal portion of eIF4G, but lacks the N-terminal region of eIF4G, which is responsible for association with the CAP binding protein eIF4E. By forming translationally inactive complexes with eIF4A and eIF3, but not with eIF4E, DAP-5 functions as a general repressor of translation. During apoptosis, the caspase-activated DAP-5 can mediate CAP-independent translation at least from its own internal ribosome entry site, thus resulting in a positive feedback loop responsible for the continuous translation of DAP-5. DAP-5 is also required for cellular differentiation, as it controls specific gene expression pathways.

REFERENCES

1. Levy-Strumpf, N., et al. 1997. DAP-5, a novel homolog of eukaryotic translation initiation factor 4G isolated as a putative modulator of γ interferon-induced programmed cell death. *Mol. Cell. Biol.* 17: 1615-1625.
2. Yamanaka, S., et al. 1997. A novel translational repressor mRNA is edited extensively in livers containing tumors caused by the transgene expression of the ApoB mRNA-editing enzyme. *Genes Dev.* 11: 321-333.
3. Imataka, H., et al. 1997. A new translational regulator with homology to eukaryotic translation initiation factor 4G. *EMBO J.* 16: 817-825.
4. Henis-Korenblit, S., et al. 2000. A novel form of DAP-5 protein accumulates in apoptotic cells as a result of caspase cleavage and internal ribosome entry site-mediated translation. *Mol. Cell. Biol.* 20: 496-506.
5. Yamanaka, S., et al. 2000. Essential role of NAT1/p97/DAP-5 in embryonic differentiation and the retinoic acid pathway. *EMBO J.* 19: 5533-5541.

CHROMOSOMAL LOCATION

Genetic locus: EIF4G2 (human) mapping to 11p15.3; Eif4g2 (mouse) mapping to 7 F1.

SOURCE

DAP-5 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DAP-5 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31677 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

DAP-5 (K-15) is recommended for detection of DAP-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

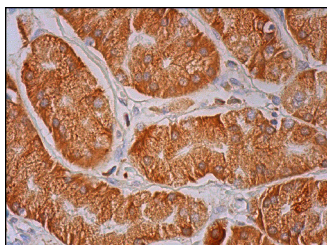
DAP-5 (K-15) is also recommended for detection of DAP-5 in additional species, including bovine and avian.

Suitable for use as control antibody for DAP-5 siRNA (h): sc-35169, DAP-5 siRNA (m): sc-35170, DAP-5 shRNA Plasmid (h): sc-35169-SH, DAP-5 shRNA Plasmid (m): sc-35170-SH, DAP-5 shRNA (h) Lentiviral Particles: sc-35169-V and DAP-5 shRNA (m) Lentiviral Particles: sc-35170-V.

Molecular Weight of DAP-5: 97 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MCF7 nuclear extract: sc-2149 or HeLa + IFN- γ cell lysate: sc-2222.

DATA



DAP-5 (K-15): sc-31677. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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

PROTOCOLS

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



Try **DAP-5 (F-2): sc-137011** or **DAP-5 (B-8): sc-137131**, our highly recommended monoclonal alternatives to DAP-5 (K-15).