

DAP-5 (H-300): sc-28224

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

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- 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.
- Imataka, H., et al. 1997. A new translational regulator with homology to eukaryotic translation initiation factor 4G. *EMBO J.* 16: 817-825.
- 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.
- 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 (H-300) is a rabbit polyclonal antibody raised against amino acids 608-907 mapping at the C-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.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

DAP-5 (H-300) 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), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

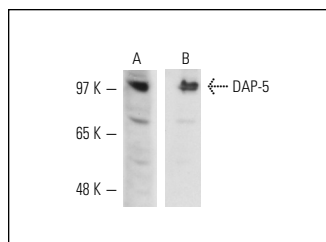
DAP-5 (H-300) is also recommended for detection of DAP-5 in additional species, including equine, canine, bovine, porcine and avian.

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: HeLa nuclear extract: sc-2120, MCF7 nuclear extract: sc-2149 or HeLa + IFN- γ cell lysate: sc-2222.

DATA



DAP-5 (H-300): sc-28224. Western blot analysis of DAP-5 expression in HeLa (A) and MCF7 (B) nuclear extracts.



DAP-5 (H-300): sc-28224. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Vantaggiato, C., et al. 2011. Senataxin modulates neurite growth through fibroblast growth factor 8 signalling. *Brain* 134: 1808-1828.

PROTOCOLS

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


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Try **DAP-5 (F-2): sc-137011** or **DAP-5 (B-8): sc-137131**, our highly recommended monoclonal alternatives to DAP-5 (H-300).