SANTA CRUZ BIOTECHNOLOGY, INC.

DAF-1 (cN-19): sc-9251

BACKGROUND

A variety of growth factor signaling molecules have been shown to regulate *C. elegans* development, including members of the EGF, FGF and TGFβ superfamilies. These factors bind to specific receptors and transduce extracellular signals to the nucleus. Receptor tyrosine kinase/Ras pathways also play a critical role in cell signaling and are responsible for proper vulval development. The DAF family proteins play a role in the control of dauer larva formation, a developmentally arrested, non-feeding dispersal stage normally formed in response to overcrowding and limited food. DAF-1, DAF-3, DAF-4 and DAF-7 are members of the TGFβ superfamily. DAF-18 is the *C. elegans* homolog of PTEN and acts as a component of the Insulin-like signalling pathway.

REFERENCES

1. Georgi, L.L., et al. 1990. DAF-1, a *C. elegans* gene controlling dauer larva development, encodes a novel receptor protein kinase. Cell 61: 635-645.
2. Carpenter, G. 1993. EGF: new tricks for an old growth factor. Curr. Opin. Cell Biol. 5: 261-264.
3. Sternberg, P.W., et al. 1995. LET-23-mediated signal transduction during *Caenorhabditis elegans* development. Mol. Reprod. Dev. 42: 523-528.
4. Kayne, P.S., et al. 1995. Ras pathways in *Caenorhabditis elegans*. Curr. Opin. Genet. Dev. 5: 38-43.
5. Ren, P., et al. 1996. Control of *C. elegans* larval development by neuronal expression of a TGFβ homolog. Science 274: 1389-1391.
6. Thatcher, J.D., et al. 1999. The DAF-3 Smad binds DNA and represses gene expression in the *Caenorhabditis elegans* pharynx. Development 126: 97-107.
7. Krishna, S., et al. 1999. Specificity of TGFβ signaling is conferred by distinct type I receptors and their associated SMAD proteins in *Caenorhabditis elegans*. Development 126: 251-260.
8. Rouault, J.P., et al. 1999. Regulation of dauer larva development in *Caenorhabditis elegans* by DAF-18, a homologue of the tumour suppressor PTEN. Curr. Biol. 9: 329-332.

SOURCE

DAF-1 (cN-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DAF-1 of *Caenorhabditis elegans* 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-9251 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

DAF-1 (cN-19) is recommended for detection of DAF-1 of *Caenorhabditis elegans* 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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) 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.

SELECT PRODUCT CITATIONS

1. Cui, P.H., et al. 2010. Impaired transactivation of the human CYP2J2 arachidonic acid epoxygenase gene in HepG2 cells subjected to nitrative stress. Br. J. Pharmacol. 159: 1440-1449.

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.