

PGBD3 (C-16): sc-132032

BACKGROUND

PiggyBac transposable element derived 3, also known as PGBD3, encodes a 593 amino acid transposase and is a member of the piggyBac transposable element derived (PGBD) gene family, which includes several genes that are derived from piggyBac transposons. Initially characterized in the cabbage looper moth, *Trichoplusia ni*, the PGBD family is conserved in a wide variety of species, including protozoa and primates. More specifically, while PGBD3 and PGBD4 are primate-specific genes, the other three members of the PGBD family (namely PGBD1, PGBD2 and PGBD5) are conserved among a variety of vertebrates. PGBD3 appears to be novel, with no clear relationship to other transposases or other known protein families. However, the PGBD3 gene overlaps with the CSB gene on chromosome 10 and, with the CSB gene, plays a role in Cockayne syndrome, a rare disorder characterized by premature aging, microcephaly, photosensitivity and severe neurologic degeneration.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 1986. Johns Hopkins University, Baltimore, MD. MIM Number: 216400. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Deloukas, P., Earthwail, M.E., Grafham, D.V., Rubinfeld, M., French, L., Steward, C.A., Sims, S.K., Jones, M.C., Searle, S., Scott, C., Howe, K., Hunt, S.E., Andrews, T.D., Gilbert, J.G., Swarbreck, D., et al. 2004. The DNA sequence and comparative analysis of human chromosome 10. *Nature* 429: 375-381.
3. Sjöblom, T., Jones, S., Wood, L.D., Parsons, D.W., Lin, J., Barber, T.D., Mandelker, D., Leary, R.J., Ptak, J., Silliman, N., Szabo, S., Buckhaults, P., Farrell, C., Meeh, P., Markowitz, S.D., Willis, J., Dawson, D., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
4. Newman, J.C., Bailey, A.D., Fan, H.Y., Pavelitz, T. and Weiner, A.M. 2008. An abundant evolutionarily conserved CSB-piggyBac fusion protein expressed in Cockayne syndrome. *PLoS Genet.* 4: e1000031.

CHROMOSOMAL LOCATION

Genetic locus: PGBD3 (human) mapping to 10q11.23.

SOURCE

PGBD3 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PGBD3 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-132032 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

PGBD3 (C-16) is recommended for detection of PGBD3 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other PGBD family members.

Suitable for use as control antibody for PGBD3 siRNA (h): sc-90397, PGBD3 shRNA Plasmid (h): sc-90397-SH and PGBD3 shRNA (h) Lentiviral Particles: sc-90397-V.

Molecular Weight of PGBD3: 68 kDa.

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.

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.