SANTA CRUZ BIOTECHNOLOGY, INC.

PEPD (A-3): sc-390042

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PEPD (peptidase D), also referred to as prolidase, is a cytosolic dipeptidase that belongs to the peptidase M24B family. PEPD hydrolyzes di- and tripeptides with proline or hydroxyproline at the C-terminus. PEPD functions as a homodimer and may play an important role in collagen metabolism as well as in the recycling of proline in various cells and tissues. Defects in the gene encoding PEPD are the primary cause of prolidase deficiency in humans. Prolidase deficiency is an autosomal recessive disorder associated with iminodipeptiduria and is characterized by skin ulcers, mental retardation, recurrent infections and A-typical facies. Mutations in the gene encoding PEPD may also be the cause of systemic lupus erythematosus and necrosis-like cell death in fibroblasts. Additionally, there is thought to be a tight linkage between the polymorphisms of prolidase and the myotonic dystrophy trait.

CHROMOSOMAL LOCATION

Genetic locus: PEPD (human) mapping to 19q13.11; Pepd (mouse) mapping to 7 B1.

SOURCE

PEPD (A-3) is a mouse monoclonal antibody raised against amino acids 101-305 mapping within an internal region of PEPD of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PEPD (A-3) is available conjugated to agarose (sc-390042 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390042 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390042 PE), fluorescein (sc-390042 FITC), Alexa Fluor® 488 (sc-390042 AF488), Alexa Fluor® 546 (sc-390042 AF546), Alexa Fluor® 594 (sc-390042 AF594) or Alexa Fluor® 647 (sc-390042 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390042 AF680) or Alexa Fluor® 790 (sc-390042 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PEPD (A-3) is recommended for detection of PEPD of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

Suitable for use as control antibody for PEPD siRNA (h): sc-97436, PEPD siRNA (m): sc-152165, PEPD shRNA Plasmid (h): sc-97436-SH, PEPD shRNA Plasmid (m): sc-152165-SH, PEPD shRNA (h) Lentiviral Particles: sc-97436-V and PEPD shRNA (m) Lentiviral Particles: sc-152165-V.

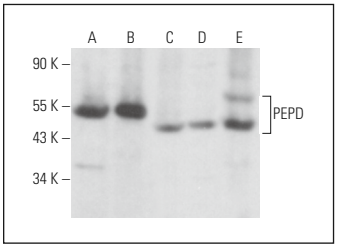
Molecular Weight of PEPD: 58 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, HeLa whole cell lysate: sc-2200 or Neuro-2A whole cell lysate: sc-364185.

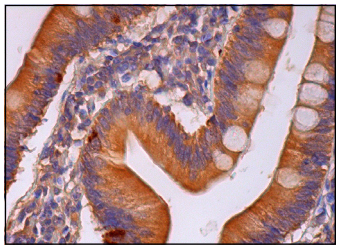
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PEPD (A-3): sc-390042. Western blot analysis of PEPD expression in HeLa (**A**), SK-N-MC (**B**), Neuro-2A (**C**) and EOC 20 (**D**) whole cell lysates and human cerebral cortex tissue extract (**E**).



PEPD (A-3): sc-390042. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Szoka, L., et al. 2019. The mechanism for differential effect of nelfinavir and indinavir on collagen metabolism in human skin fibroblasts. Exp. Dermatol. 28: 845-853.
2. Yang, L., et al. 2022. Depleting receptor tyrosine kinases EGFR and HER2 overcomes resistance to EGFR inhibitors in colorectal cancer. J. Exp. Clin. Cancer Res. 41: 184.
3. Hsu, K.S., et al. 2022. Cancer cell survival depends on collagen uptake into tumor-associated stroma. Nat. Commun. 13: 7078.

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.

PROTOCOLS

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