SANTA CRUZ BIOTECHNOLOGY, INC.

PAFAH1B3 (D-8): sc-393612

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The platelet activating factor (PAF) acetylhydrolases catalyze hydrolysis of the sn-2 ester bond of PAF and related pro-inflammatory phospholipids and thus attenuate their bioactivity. The family of PAF acetylhydrolases includes one secreted plasma isozyme and two intracellular isozymes. The intracellular isozymes are distinguished by differences in their primary sequence, tissue localization, subunit composition and substrate preferences. The most thoroughly characterized intracellular isoform, PAFAH1B, is a heterotrimeric protein expressed in brain tissue and plays and important role in brain development and function. PAFAH1B is comprised of a regulatory subunit (LIS1) and two homologous (63% identity) catalytic subunits (PAFAH1B2 and PAFAH1B3), which harbor all the activity of the enzyme. The PAFAH1B2 and PAFAH1B3 subunits readily associate with very high affinity to form heterodimers, and this dimerization is essential for both stability and catalytic activity. PAFAH1B3 is also commonly known as PAFAH1B 29 kDa subunit, PAFAH1B subunit γ or PAFAH1B subunit α1.

REFERENCES

1. Moro, F., et al. 1998. The β and γ subunits of the human platelet-activating factor acetyl hydrolase isoform Ib (PAFAH1B2 and PAFAH1B3) map to chromosome 11q23 and 19q13.1, respectively. Genomics 51: 157-159.
2. Derewenda, Z.S. and Derewenda, U. 1998. The structure and function of platelet-activating factor acetylhydrolases. Cell. Mol. Life Sci. 54: 446-455.
3. Derewenda, Z.S. and Ho, Y.S. 1999. PAF-acetylhydrolases. Biochim. Biophys. Acta 1441: 229-236.
4. Sweeney, K.J., et al. 2000. Lissencephaly associated mutations suggest a requirement for the PAFAH1B heterotrimeric complex in brain development. Mech. Dev. 92: 263-271.
5. Nothwang, H.G., et al. 2001. Functional hemizygosity of PAFAH1B3 due to a PAFAH1B3-CLK2 fusion gene in a female with mental retardation, ataxia and atrophy of the brain. Hum. Mol. Genet. 10: 797-806.

CHROMOSOMAL LOCATION

Genetic locus: PAFAH1B3 (human) mapping to 19q13.2.

SOURCE

PAFAH1B3 (D-8) is a mouse monoclonal antibody raised against amino acids 181-231 mapping at the C-terminus of PAFAH1B3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PAFAH1B3 (D-8) is available conjugated to agarose (sc-393612 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393612 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393612 PE), fluorescein (sc-393612 FITC), Alexa Fluor® 488 (sc-393612 AF488), Alexa Fluor® 546 (sc-393612 AF546), Alexa Fluor® 594 (sc-393612 AF594) or Alexa Fluor® 647 (sc-393612 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393612 AF680) or Alexa Fluor® 790 (sc-393612 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PAFAH1B3 (D-8) is recommended for detection of PAFAH1B3 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PAFAH1B3 siRNA (h): sc-97212, PAFAH1B3 shRNA Plasmid (h): sc-97212-SH and PAFAH1B3 shRNA (h) Lentiviral Particles: sc-97212-V.

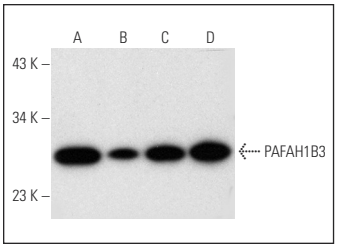
Molecular Weight of PAFAH1B3: 29 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, IMR-32 cell lysate: sc-2409 or HeLa whole cell lysate: sc-2200.

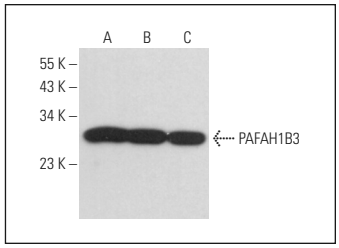
RECOMMENDED SUPPORT REAGENTS

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.

DATA



PAFAH1B3 (D-8): sc-393612. Western blot analysis of PAFAH1B3 expression in IMR-32 (**A**), HeLa (**B**), K-562 (**C**) and MIA PaCa-2 (**D**) whole cell lysates.



PAFAH1B3 (D-8): sc-393612. Western blot analysis of PAFAH1B3 expression in IMR-32 (**A**), NTERA-2 cl.D1 (**B**) and Jurkat (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Desrochers, G.F., et al. 2022. microRNA-27b regulates hepatic lipase enzyme LIPC and reduces triglyceride degradation during hepatitis C virus infection. J. Biol. Chem. 298: 101983.

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.