SANTA CRUZ BIOTECHNOLOGY, INC.

Pleckstrin (h2): 293T Lysate: sc-170743

BACKGROUND

Activation of protein kinase C (PKC) in platelets results in immediate phosphorylation of Pleckstrin (previously called 40K or P47), the major PKC substrate in platelets. Pleckstrin contains a Ca^{2+}-binding "EF-hand" structure and PKC phosphorylation sites at Ser 113 and Ser 117. The N- and C-termini of Pleckstrin contain two Pleckstrin homology domains (PH), which mediate protein-protein and protein-lipid interactions. Pleckstrin is highly expressed in human neutrophils. Pleckstrin is rapidly phosphorylated following treatment of neutrophils in response to inflammatory stimuli, probably by non-conventional PKC isoforms δ or ξ, which are expressed in human neutrophils. Phosphorylation by non-conventional PKC isoforms induces a conformational change in Pleckstrin that promotes its interaction with membranes and/or with the cytoskeleton, serving to target proteins or lipids recognized by PH domains to sites where they can contribute to the microbicidal response.

REFERENCES

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3. Yoon, H.S., Hajduk, P.J., Petros, A.M., Olejniczak, E.T., Meadows, R.P. and Fesik, S.W. 1994. Solution structure of a Pleckstrin-homology domain. Nature 369: 672-675.
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5. Craig, K.L. and Harley, C.B. 1996. Phosphorylation of human Pleckstrin on Ser 113 and Ser 117 by protein kinase C. Biochem. J. 314: 937-942.
6. Brumell, J.H., Craig, K.L., Ferguson, D., Tyers, M. and Grinstein, S. 1997. Phosphorylation and subcellular redistribution of Pleckstrin in human neutrophils. J. Immunol. 158: 4862-4871.
7. Cmarik, J.L., Hegamyer, G., Gerrard, B., Dean, M. and Colburn, N.H. 2000. cDNA cloning and mapping of mouse Pleckstrin (Plek), a gene upregulated in transformation-resistant cells. Genomics 66: 204-212.

CHROMOSOMAL LOCATION

Genetic locus: PLEK (human) mapping to 2p14.

PRODUCT

Pleckstrin (h2): 293T Lysate represents a lysate of human Pleckstrin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Pleckstrin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Pleckstrin antibodies. Recommended use: 10-20 µl per lane.

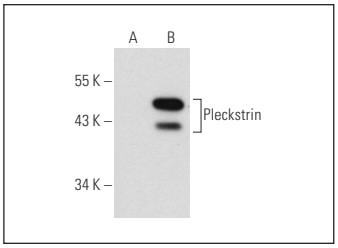
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Pleckstrin (227.1): sc-100813 is recommended as a positive control antibody for Western Blot analysis of enhanced human Pleckstrin expression in Pleckstrin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



Pleckstrin (227.1): sc-100813. Western blot analysis of Pleckstrin expression in non-transfected: sc-117752 (**A**) and human Pleckstrin transfected: sc-170743 (**B**) 293T whole cell lysates.

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.