SANTA CRUZ BIOTECHNOLOGY, INC.

# PI 3-kinase p85β (h): 293T Lysate: sc-112567



The Power to Question

## **BACKGROUND**

Phosphatidylinositol 3-kinase (PI 3-kinase) is composed of p85 and p110 subunits. p85 lacks PI 3-kinase activity and acts as an adapter, coupling p110 to activated protein tyrosine kinase. Two forms of p85 have been described (p85 $\alpha$  and p85 $\beta$ ), each possessing one SH3 and two SH2 domains. Various p110 isoforms have been identified. p110 $\alpha$  and p110 $\beta$  interact with p85 $\alpha$ , and p110 $\alpha$  has also been shown to interact with p85 $\beta$  in vitro. p110 $\delta$  expression is restricted to white blood cells. It has been shown to bind p85 $\alpha$  and p85 $\beta$ , but it apparently does not phosphorylate these subunits. p110 $\delta$  seems to have the capacity to autophosphorylate. p110 $\gamma$  does not interact with the p85 subunits. It has been shown to be activated by  $\alpha$  and  $\beta\gamma$  heterotrimeric G proteins.

## **REFERENCES**

- Skolnik, E.Y., Margolis, B., Mohammadi, M., Lowenstein, E., Fischer, R., Drepps, A., Ullrich, A. and Schlessinger, J. 1991. Cloning of PI 3-kinaseassociated p85 utilizing a novel method for expression/cloning of target proteins for receptor tyrosine kinases. Cell 65: 83-90.
- 2. Otsu, M., Hiles, I., Gout, I., Fry, M.J., Ruiz-Larrea, F., Panayotou, G., Thompson, A., Dhand, R., Hsuan, J., Totty, N., et al. 1991. Characterization of two 85 kDa proteins that associate with receptor tyrosine kinases, middle-T/pp60-Src complexes, and PI 3-kinase. Cell 65: 91-104.
- Hiles, I.D., Otsu, M., Volinia, S., Fry, M.J., Gout, I., Dhand, R., Panayotou, G., Ruiz-Larrea, F., Thompson, A., Totty, N.F., et al. 1992. Phosphatidy-linositol 3-kinase: structure and expression of the 110 kDa catalytic subunit. Cell 70: 419-429.
- 4. Hu, P., Mondino, A., Skolnik, E.Y. and Schlessinger, J. 1993. Cloning of a novel, ubiquitously expressed human phosphatidylinositol 3-kinase and identification of its binding site on p85. Mol. Cell. Biol. 13: 7677-7688.
- Stoyanov, B., Volinia, S., Hanck, T., Rubio, I., Loubtchenkov, M., Malek, D., Stoyanova, S., Vanhaesebroeck, B., Dhand, R., Nurnberg, B., et al. 1995.
  Cloning and characterization of a G protein-activated human phosphoinositide 3-kinase. Science 269: 690-693.
- Vanhaesebroeck, B., Welham, M.J., Kotani, K., Stein, R., Warne, P.H., Zvelebil, M.J., Higashi, K., Volinia, S., Downward, J. and Waterfield, M.D. 1997. p1108, a novel phosphoinositide 3-kinase in leukocytes. Proc. Natl. Acad. Sci. USA 94: 4330-4335.

## **CHROMOSOMAL LOCATION**

Genetic locus: PIK3R2 (human) mapping to 19p13.11.

# **PRODUCT**

PI 3-kinase p85 $\beta$  (h): 293T Lysate represents a lysate of human PI 3-kinase p85 $\beta$  transfected 293T cells and is provided as 100 µg protein in 200 µI 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**

Pl 3-kinase p85 $\beta$  (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Pl 3-kinase p85 $\beta$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

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

### **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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com