

p115 (h4): 293T Lysate: sc-175430

BACKGROUND

The mammalian protein p115, known also as transcytosis-associated protein (TAP)/tethering factor/vesicle docking protein, and its yeast homolog Uso1p have an essential role in membrane trafficking. p115 is phosphorylated in interphase but not in mitotic cells. Phosphorylated p115 is localized to the cytosol, whereas the unphosphorylated form is associated with membranes, mostly of the Golgi complex. Upon phosphorylation of p115 at Ser 942, p115 is released from the membranes. In mammary glands, p115 synthesis is dependent of the stage of lactation. Both Giantin and GM130 compete for binding to the C-terminal acidic domain of p115, and p115-Giantin and p115-GM130 interactions mediate independent membrane tethering events. The amino-terminal region of p115 is required for its localization to the Golgi. p115 is also expressed on transcytotic vesicles, where it is required for vesicle fusion with the target membrane and vesicular tubular clusters, which are involved in ER to Golgi transport. Rab 1 recruits p115 to coat protein complex II (COPII) vesicles during budding from the endoplasmic reticulum, where it interacts with a select set of SNAREs. p115 is a general factor acting within the secretory and endocytic pathways to bind transport vesicles prior to membrane fusion.

REFERENCES

- Barroso, M., et al. 1995. Transcytosis-associated protein (TAP)/p115 is a general fusion factor required for binding of vesicles to acceptor membranes. *Proc. Natl. Acad. Sci. USA* 92: 527-531.
- Nelson, D.S., et al. 1998. The membrane transport factor TAP/p115 cycles between the Golgi and earlier secretory compartments and contains distinct domains required for its localization and function. *J. Cell Biol.* 143: 319-331.
- Sohda, M., et al. 1998. Phosphorylation of the vesicle docking protein p115 regulates its association with the Golgi membrane. *J. Biol. Chem.* 273: 5385-5388.
- Linstedt, A.D., et al. 2000. Binding relationships of membrane tethering components. The Giantin N-terminus and the GM130 N-terminus compete for binding to the p115 C-terminus. *J. Biol. Chem.* 275: 10196-10201.
- Watanabe, A., et al. 2000. Development changes in the protein and mRNA content of a p115/transcytosis-associated protein in the bovine mammary gland. *J. Endocrinol.* 166: 319-327.
- Allan, B.B., et al. 2000. Rab 1 recruitment of p115 into a *cis*-SNARE complex: programming budding COPII vesicles for fusion. *Science* 289: 444-448.

CHROMOSOMAL LOCATION

Genetic locus: USO1 (human) mapping to 4q21.1.

PRODUCT

p115 (h4): 293T Lysate represents a lysate of human p115 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

p115 (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive p115 antibodies. Recommended use: 10-20 µl per lane.

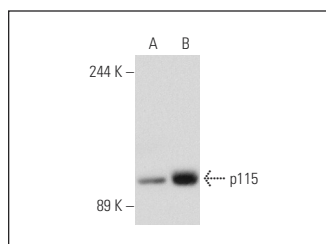
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

p115 (H-11): sc-48363 is recommended as a positive control antibody for Western Blot analysis of enhanced human p115 expression in p115 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



p115 (H-11): sc-48363. Western blot analysis of p115 expression in non-transfected: sc-117752 (A) and human p115 transfected: sc-175430 (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.