

ACK (m): 293T Lysate: sc-118200

BACKGROUND

The Ras-related Rho subfamily of GTP-binding proteins (p21s), which includes Rho, Rac and Cdc42Hs, is implicated in different aspects of cytoskeletal organization. These proteins resemble Ras p21 in that their active GTP-bound form is inactivated by intrinsic hydrolysis of the GTP to GDP, which can be stimulated by GTPase-activating proteins (GAPs). ACK, a tyrosine kinase that specifically binds Cdc42Hs in its GTP-bound form, has been described. This binding is mediated by a unique sequence of 47 amino acids C-terminal to an SH3 domain and inhibits both the intrinsic and GAP-stimulated GTPase activity of Cdc42Hs. These findings suggest that ACK may represent a new class of proteins that sustains the GTP-bound active form of the Rho subfamily of GTP binding proteins and which is directly linked to a tyrosine phosphorylation pathway.

REFERENCES

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5. Manser, E., et al. 1993. A non-receptor tyrosine kinase that inhibits the GTPase activity of p21Cdc42. *Nature* 363: 364-367.
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7. Mott, H.R., et al. 1999. Structure of the small G protein Cdc42 bound to the GTPase-binding domain of ACK. *Nature* 399: 384-388.
8. Teo, M., et al. 2001. The tyrosine kinase ACK1 associates with Clathrin-coated vesicles through a binding motif shared by arrestin and other adaptors. *J. Biol. Chem.* 276: 18392-18398.
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CHROMOSOMAL LOCATION

Genetic locus: Tnk2 (mouse) mapping to 16 B3.

PRODUCT

ACK (m): 293T Lysate represents a lysate of mouse ACK transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

ACK (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ACK antibodies. Recommended use: 10-20 μ l per lane.

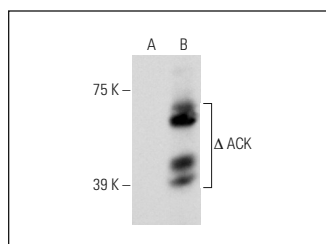
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ACK (A-11): sc-28336 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ACK expression in ACK 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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



ACK (A-11): sc-28336. Western blot analysis of ACK expression in non-transfected: sc-117752 (A) and truncated mouse ACK transfected: sc-118200 (B) 293T whole cell lysates.

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.

PROTOCOLS

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