

# ACK (H-172): sc-9165

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: TNK2 (human) mapping to 3q29; Tnk2 (mouse) mapping to 16 B3.

## SOURCE

ACK (H-172) is a rabbit polyclonal antibody raised against amino acids 920-1036 mapping at the C-terminus of ACK of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

ACK (H-172) is recommended for detection of ACK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). ACK (H-172) is also recommended for detection of ACK in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ACK siRNA (h): sc-29632, ACK siRNA (m): sc-29633, ACK shRNA Plasmid (h): sc-29632-SH, ACK shRNA Plasmid (m): sc-29633-SH, ACK shRNA (h) Lentiviral Particles: sc-29632-V and ACK shRNA (m) Lentiviral Particles: sc-29633-V.

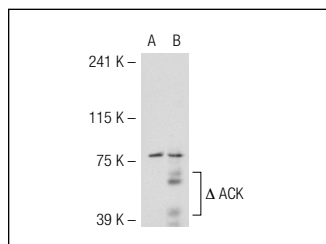
Molecular Weight of ACK: 60/115/119 kDa.

Positive Controls: ACK (m): 293T Lysate: sc-118200, H4 cell lysate: sc-2408 or MM-142 cell lysate: sc-2246.

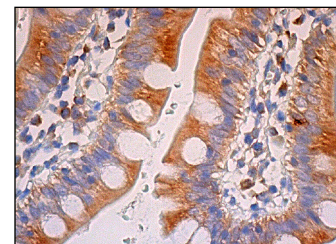
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



ACK (H-172): sc-9165. Western blot analysis of ACK expression in non-transfected: sc-117752 (A) and truncated mouse ACK transfected: sc-118200 (B) 293T whole cell lysates.



ACK (H-172): sc-9165. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Chan, W., et al. 2009. Down-regulation of active ACK1 is mediated by association with the E3 ubiquitin ligase NEDD4-2. J. Biol. Chem. 284: 8185-8194.
- Fujimoto, Y., et al. 2011. A single nucleotide polymorphism in activated Cdc42 associated tyrosine kinase 1 influences the interferon therapy in hepatitis C patients. J. Hepatol. 54: 629-639.
- Lenna, S., et al. 2013. HLA-B35 and dsRNA induce endothelin-1 via activation of ATF4 in human microvascular endothelial cells. PloS ONE 8: e56123.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ACK (A-11): sc-28336**, our highly recommended monoclonal alternative to ACK (H-172). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ACK (A-11): sc-28336**.