SANTA CRUZ BIOTECHNOLOGY, INC.

ULK4 (Y-13): sc-99706

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. ULK4 (unc-51-like kinase 4) is a 1,275 amino acid protein that contains one protein kinase domain and one HEAT repeat and belongs to the Ser/Thr protein kinase family. Although containing what is thought to be a catalytically inactive domain, ULK4 may play a role in the ATP-dependent phosphorylation of target proteins. The gene encoding ULK4 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. Bairoch, A. and Claverie, J.M. 1988. Sequence patterns in protein kinases. Nature 331: 22.
2. Hanks, S.K., Quinn, A.M. and Hunter, T. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. Science 241: 42-52.
3. Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. Methods Enzymol. 200: 38-62.
4. Véron, M., Radzio-Andzelm, E., Tsigelny, I. and Taylor, S. 1994. Protein kinases share a common structural motif outside the conserved catalytic domain. Cell. Mol. Biol. 40: 587-596.
5. Manning, G., Whyte, D.B., Martinez, R., Hunter, T. and Sudarsanam, S. 2002. The protein kinase complement of the human genome. Science 298: 1912-1934.

CHROMOSOMAL LOCATION

Genetic locus: ULK4 (human) mapping to 3p22.1; Ulk4 (mouse) mapping to 9 F4.

SOURCE

ULK4 (Y-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of ULK4 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99706 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ULK4 (Y-13) is recommended for detection of ULK4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with ULK1, ULK2 and ULK3.

ULK4 (Y-13) is also recommended for detection of ULK4 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ULK4 siRNA (h): sc-77914, ULK4 siRNA (m): sc-154916, ULK4 shRNA Plasmid (h): sc-77914-SH, ULK4 shRNA Plasmid (m): sc-154916-SH, ULK4 shRNA (h) Lentiviral Particles: sc-77914-V and ULK4 shRNA (m) Lentiviral Particles: sc-154916-V.

Molecular Weight of ULK4: 142 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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