

# ULK3 (S-12): sc-137899

## 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. ULK3 (unc-51-like kinase 3) is a 214 amino acid protein that contains one protein kinase domain and functions to catalyze the ATP-dependent phosphorylation of target proteins. The gene encoding ULK3 maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome.

## REFERENCES

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- 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.
- 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. *Meth. Enzymol.* 200: 38-62.
- Vuori, K.A., Nordlund, E., Kallio, J., Salakoski, T. and Nikinmaa, M. 2008. Tissue-specific expression of aryl hydrocarbon receptor and putative developmental regulatory modules in Baltic salmon yolk-sac fry. *Aquat. Toxicol.* 87: 19-27.
- Daub, H., Olsen, J.V., Bairlein, M., Gnad, F., Oppermann, F.S., Körner, R., Greff, Z., Keri, G., Stemmann, O. and Mann, M. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. *Mol. Cell* 31: 438-448.

## CHROMOSOMAL LOCATION

Genetic locus: ULK3 (human) mapping to 15q24.1; Ulk3 (mouse) mapping to 9 B.

## SOURCE

ULK3 (S-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ULK3 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-137899 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.

## RESEARCH USE

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

## APPLICATIONS

ULK3 (S-12) is recommended for detection of ULK3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ULK family members.

ULK3 (S-12) is also recommended for detection of ULK3 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for ULK3 siRNA (h): sc-89940, ULK3 siRNA (m): sc-154915, ULK3 shRNA Plasmid (h): sc-89940-SH, ULK3 shRNA Plasmid (m): sc-154915-SH, ULK3 shRNA (h) Lentiviral Particles: sc-89940-V and ULK3 shRNA (m) Lentiviral Particles: sc-154915-V.

Molecular Weight of ULK3 isoforms 1/2: 53/24 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.

## PROTOCOLS

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