SANTA CRUZ BIOTECHNOLOGY, INC.

# Kap95 (yN-15): sc-27053

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*The Power to Question*

## BACKGROUND

Members of the importin-karyopherin nuclear transport receptor family recognize proteins to be transported into the nucleus. After docking at the nuclear pore complex (NPC), the cargo-receptor complex moves through the aqueous pore channel. Upon cargo release, importin moves back through the channel for new rounds of transport. The nuclear pore complex (NPC), a multicomponent structure, contains a subset of proteins that bind nuclear transport factors or karyopherins and mediate their movement across the nuclear envelope. During import, the yeast karyopherin Kap95, also known as Importin 95 or Importin β, mediates docking of the nuclear localization signal-receptor and ligand to the NPC. In Kap95, a nuclear export signal directs the recycling of this factor back to the cytoplasm for continued rounds of import.This nuclear export signal also provides the ability of Kap95 to interact with the nucleoporin GLFG repeat regions of Nup116 and Nup100. Release of Kap95 from the NPC complex requires a direct interaction with Gsp1-GTP.

## REFERENCES


1. Iovine, M.K., and Wente, S.R. 1997. A nuclear export signal in Kap95p is required for both recycling the import factor and interaction with the nucleoporin GLFG repeat regions of Nup116p and Nup100p. J. Cell Biol. 137: 797-811.
2. Seedorf, M., and Silver, P.A. 1997. Importin/karyopherin protein family members required for mRNA export from the nucleus. Proc. Natl. Acad. Sci. USA 94: 8590-8595.
3. Seedorf, M., Damelin, M., Kahana, J., Taura, T., and Silver, P.A. 1999. Interactions between a nuclear transporter and a subset of nuclear pore complex proteins depend on Ran GTPase. Mol. Cell. Biol. 19: 1547-1557.
4. Solsbacher, J., Maurer, P., Vogel, F., and Schlenstedt, G. 2000. Nup2p, a yeast nucleoporin, functions in bidirectional transport of Importin α. Mol. Cell. Biol. 20: 8468-8479.
5. Marelli, M., Lusk, C.P., Chan, H., Aitchison, J.D., and Wozniak, R.W. 2001. A link between the synthesis of nucleoporins and the biogenesis of the nuclear envelope. J. Cell Biol. 153: 709-724.


## SOURCE

Kap95 (yN-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Kap95 of *Saccharomyces cerevisiae* origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-27053 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

Kap95 (yN-15) is recommended for detection of Kap95 of *Saccaromyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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.

## 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.