

Sup35 (yS-20): sc-25915

BACKGROUND

The *Saccharomyces cerevisiae* genes Sup35 and Sup45 control termination of translation in cytoplasmic ribosomes. The product of the Sup35 gene, the translation termination eRF3 factor, can be converted into a prion-like protein called Sup35. Sup35 in yeast forms fibrillar amyloid assemblies intrinsic to its prion function. The N-terminal region of Sup35 plays a central role in prion induction and propagation. The C-terminal region provides translation termination activity. The function of the highly charged, conformationally flexible middle region (M) is unknown. The Sup35 gene encodes a ribosome-associated protein (Sup35p) whose N-terminal domain defines its ability to undergo a heritable prion-like conformational switch, which is manifested as the cytoplasmically inherited [PSI⁺] determinant.

REFERENCES

1. Ter-Avanesyan, M.D., Dagkesamanskaya, A.R., Kushnirov, V.V. and Smirnov, V.N. 1994. The SUP35 omnipotent suppressor gene is involved in the maintenance of the non-Mendelian determinant [psi⁺] in the yeast *Saccharomyces cerevisiae*. *Genetics* 137: 671-676.
2. Volkov, K.V., Kurishko, K., Inge-Vechtomov, S.G. and Mironova, L.N. 2000. Polymorphism of the SUP35 gene and its product in the *Saccharomyces cerevisiae* yeasts. *Genetika* 36: 155-158.
3. Shumov, N.N., Volkov, K.V. and Mironova, L.N. 2000. Interaction of ATP17 gene with SUP45 and SUP35 genes in *Saccharomyces cerevisiae* yeast. *Genetika* 36: 644-650.
4. Kushnirov, V.V., Kochneva-Pervukhova, N.V., Chechenova, M.B., Frolova, N.S. and Ter-Avanesyan, M.D. 2000. Prion properties of the Sup35 protein of yeast *Pichia methanolic*. *EMBO J.* 19: 324-331.
5. Balbirnie, M., Grothe, R. and Eisenberg, D.S. 2001. An amyloid-forming peptide from the yeast prion Sup35 reveals a dehydrated β -sheet structure for amyloid. *Proc. Natl. Acad. Sci. USA* 98: 2375-2380.
6. Liu, J.J., Sondheimer, N. and Lindquist, S.L. 2002. Changes in the middle region of Sup35 profoundly alter the nature of epigenetic inheritance for the yeast prion [PSI⁺]. *Proc. Natl. Acad. Sci. USA* 99: 16446-16453.

SOURCE

Sup35 (yS-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Sup35 of *Saccharomyces cerevisiae* origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-25915 P, (100 μ g 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

Sup35 (yS-20) is recommended for detection of Sup35 of *Saccharomyces 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).

Molecular Weight of Sup35: 76.5 kDa.

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.

SELECT PRODUCT CITATIONS

1. Garrity, S.J., Sivanathan, V., Dong, J., Lindquist, S. and Hochschild, A. 2010. Conversion of a yeast prion protein to an infectious form in bacteria. *Proc. Natl. Acad. Sci. USA* 107: 10596-10601.
2. Sivanathan, V. and Hochschild, A. 2012. Generating extracellular amyloid aggregates using *E. coli* cells. *Genes Dev.* 26: 2659-2667.

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.