

BMS1 (H-178): sc-98303

BACKGROUND

BMS1 (ribosome biogenesis protein BMS1 homolog) is a 1,282 amino acid protein encoded by the human gene BMS1. BMS1 is a nuclear protein that belongs to the BMS1/TSR1 family (BMS1 subfamily). BMS1 is believed to act as a molecular switch during maturation of the 40S ribosomal subunit in the nucleolus. The 40S ribosomal subunit is an important member of the 80S ribosome complex, which also includes initiator tRNA and a 60S ribosomal subunit. The 80S ribosome is assembled by eukaryotic initiation factors (eIFs) at the initiation codon of mRNA in order to begin translation initiation. The joining of these ribosomal subunits requires eIF5B.

REFERENCES

1. Pestova, T.V., Lomakin, I.B., Lee, J.H., Choi, S.K., Dever, T.E. and Hellen, C.U. 2000. The joining of ribosomal subunits in eukaryotes requires eIF5B. *Nature* 403: 332-335.
2. Crosier, M., Viggiano, L., Guy, J., Misceo, D., Stones, R., Wei, W., Hearn, T., Ventura, M., Archidiacono, N., Rocchi, M. and Jackson, M.S. 2002. Human paralogs of KIAA0187 were created through independent pericentromeric-directed and chromosome-specific duplication mechanisms. *Genome Res.* 12: 67-80.
3. Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc. Natl. Acad. Sci. USA* 99: 16899-16903.
4. Andersen, J.S., Lyon, C.E., Fox, A.H., Leung, A.K., Lam, Y.W., Steen, H., Mann, M. and Lamond, A.I. 2002. Directed proteomic analysis of the human nucleolus. *Curr. Biol.* 12: 1-11.
5. Unbehauen, A., Borukhov, S.I., Hellen, C.U. and Pestova, T.V. 2004. Release of initiation factors from 48S complexes during ribosomal subunit joining and the link between establishment of codon-anticodon base-pairing and hydrolysis of eIF2-bound GTP. *Genes Dev.* 18: 3078-3093.
6. Andersen, J.S., Lam, Y.W., Leung, A.K., Ong, S.E., Lyon, C.E., Lamond, A.I. and Mann, M. 2005. Nucleolar proteome dynamics. *Nature* 433: 77-83.
7. LocusLink Report (LocusID: 9790). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: BMS1 (human) mapping to 10q11.21; Bms1 (mouse) mapping to 6 F1.

SOURCE

BMS1 (H-178) is a rabbit polyclonal antibody raised against amino acids 811-988 mapping within an internal region of BMS1 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.

APPLICATIONS

BMS1 (H-178) is recommended for detection of BMS1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BMS1 (H-178) is also recommended for detection of BMS1 in additional species, including canine.

Suitable for use as control antibody for BMS1 siRNA (h): sc-90718, BMS1 siRNA (m): sc-141720, BMS1 shRNA Plasmid (h): sc-90718-SH, BMS1 shRNA Plasmid (m): sc-141720-SH, BMS1 shRNA (h) Lentiviral Particles: sc-90718-V and BMS1 shRNA (m) Lentiviral Particles: sc-141720-V.

Molecular Weight of BMS1: 146 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) 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.

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.

PROTOCOLS

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