

RMI2 (A-14): sc-167291

BACKGROUND

C16orf75, also known as BLAP18 (BLM-associated protein of 18 kDa) or RMI2 (RecQ-mediated genome instability protein 2), is a 147 amino acid nuclear protein. Phosphorylated during mitosis, C16orf75 contains one OB DNA-binding domain. C16orf75 is a component of the RMI complex, which contains the proteins Topo III α and BLAP75. The RMI complex plays a role in the limiting of DNA crossover formation in cells by processing homologous recombination intermediates. The RMI complex interacts directly with BLM and directs BLM-containing complexes to chromatin and stress-induced nuclear foci. The gene that encodes C16orf75 maps to human chromosome 16p13.13. Chromosome 16 encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders.

REFERENCES

- Xu, D., Guo, R., Sobek, A., Bachrati, C.Z., Yang, J., Enomoto, T., Brown, G.W., Hoatlin, M.E., Hickson, I.D. and Wang, W. 2008. RMI, a new OB-fold complex essential for Bloom syndrome protein to maintain genome stability. *Genes Dev.* 22: 2843-2855.
- Singh, T.R., Ali, A.M., Busygina, V., Raynard, S., Fan, Q., Du, C.H., Andreassen, P.R., Sung, P. and Meetei, A.R. 2008. BLAP18/RMI2, a novel OB-fold-containing protein, is an essential component of the Bloom heliase-double Holliday junction dissolvase. *Genes Dev.* 22: 2856-2868.
- Cooper, J.D., Smyth, D.J., Smiles, A.M., Plagnol, V., Walker, N.M., Allen, J.E., Downes, K., Barrett, J.C., Healy, B.C., Mychaleckyj, J.C., Warram, J.H. and Todd, J.A. 2008. Meta-analysis of genome-wide association study data identifies additional type 1 diabetes risk loci. *Nat. Genet.* 40: 1399-1401.
- Fransen, K., Visschedijk, M.C., van Sommeren, S., Fu, J.Y., Franke, L., Festen, E.A., Stokkers, P.C., van Bodegraven, A.A., Crusius, J.B., Hommes, D.W., Zanen, P., de Jong, D.J., Wijmenga, C., van Diemen, C.C. and Weersma, R.K. 2010. Analysis of SNPs with an effect on gene expression identifies UBE2L3 and BCL3 as potential new risk genes for Crohn's disease. *Hum. Mol. Genet.* 19: 3482-3488.
- Dubois, P.C., Trynka, G., Franke, L., Hunt, K.A., Romanos, J., Curtotti, A., Zernakova, A., Heap, G.A., Adány, R., Aromaa, A., Bardella, M.T., van den Berg, L.H., Bockett, N.A., de la Concha, E.G., Dema, B., Fehrmann, R.S., Fernández-Arquero, M., Fialal, S., et al. 2010. Multiple common variants for celiac disease influencing immune gene expression. *Nat. Genet.* 42: 295-302.

CHROMOSOMAL LOCATION

Genetic locus: RMI2 (human) mapping to 16p13.13; Rmi2 (mouse) mapping to 16 A1.

SOURCE

RMI2 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RMI2 of human 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-167291 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RMI2 (A-14) is recommended for detection of RMI2 human origin, A630055G03Rik of mouse origin and the corresponding rat homolog 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 other RMI family members.

RMI2 (A-14) is also recommended for detection of RMI2 in additional species, including canine.

Suitable for use as control antibody for RMI2 siRNA (h): sc-93410, RMI2 shRNA Plasmid (h): sc-93410-SH and RMI2 shRNA (h) Lentiviral Particles: sc-93410-V.

Molecular Weight of RMI2: 16 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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.