

Med15 (KJ-2): sc-101185

BACKGROUND

In mammalian cells, transcription is regulated in part by high molecular weight co-activating complexes that mediate signals between transcriptional activators and RNA polymerase II (Pol II). The Mediator complex is one such multiprotein structure that functions as a bridge between regulatory proteins and Pol II, thereby regulating Pol II-dependent transcription. Med15 (Mediator of RNA polymerase II transcription subunit 15), also known as ARC105, CTG7A, PCQAP, TIG1 or TNRC7, is a 788 amino acid subunit of the Mediator complex that localizes to both the nucleus and the cytoplasm. Expressed ubiquitously with highest expression in placenta and blood, Med15 participates in the regulation of Pol II-mediated gene expression and is thought to play a key role in the control of lipid homeostasis. The gene encoding Med15 is located in a region on chromosome 22 that is deleted in DiGeorge syndrome, suggesting that the loss of Med15 may be associated with this rare congenital disease. Due to alternative splicing events, Med15 is expressed as two isoforms.

REFERENCES

- Näär, A.M., et al. 1999. Composite co-activator ARC mediates chromatin-directed transcriptional activation. *Nature* 398: 828-832.
- Abraham, S., et al. 2000. A novel glutamine-rich putative transcriptional adaptor protein (TIG-1), preferentially expressed in placental and bone-marrow tissues. *Gene* 255: 389-400.
- Berti, L., et al. 2001. Isolation and characterization of a novel gene from the DiGeorge chromosomal region that encodes for a Mediator subunit. *Genomics* 74: 320-332.
- Kato, Y., et al. 2002. A component of the ARC/Mediator complex required for TGFβ/Nodal signalling. *Nature* 418: 641-646.
- Sandhu, H.K., et al. 2004. An association study of PCQAP polymorphisms and schizophrenia. *Psychiatr. Genet.* 14: 169-172.
- Zhang, J., et al. 2004. Methylation of the retinoid response gene TIG1 in prostate cancer correlates with methylation of the retinoic acid receptor beta gene. *Oncogene* 23: 2241-2249.

CHROMOSOMAL LOCATION

Genetic locus: MED15 (human) mapping to 22q11.21; Med15 (mouse) mapping to 16 A3.

SOURCE

Med15 (KJ-2) is a mouse monoclonal antibody raised against recombinant Med15 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Med15 (KJ-2) is recommended for detection of Med15 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).

Suitable for use as control antibody for Med15 siRNA (h): sc-75767, Med15 siRNA (m): sc-149348, Med15 shRNA Plasmid (h): sc-75767-SH, Med15 shRNA Plasmid (m): sc-149348-SH, Med15 shRNA (h) Lentiviral Particles: sc-75767-V and Med15 shRNA (m) Lentiviral Particles: sc-149348-V.

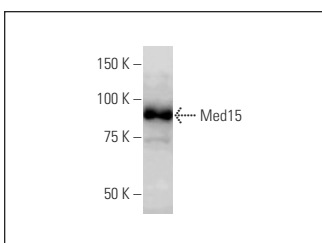
Molecular Weight of Med15: 101 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

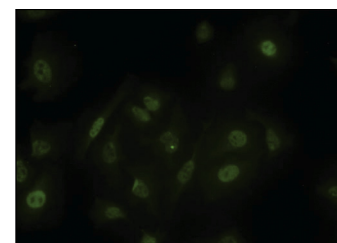
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Med15 (KJ-2): sc-101185. Western blot analysis of Med15 expression in HeLa nuclear extract.



Med15 (KJ-2): sc-101185. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Thiaville, M.M., et al. 2008. Activated transcription via mammalian amino acid response elements does not require enhanced recruitment of the Mediator complex. *Nucleic Acids Res.* 36: 5571-5580.
- Viscarra, J.A., et al. 2017. Transcriptional activation of lipogenesis by Insulin requires phosphorylation of MED17 by CK2. *Sci. Signal.* 10: eaai8596.
- Terabayashi, T. and Hashimoto, S. 2021. Increased unfolded protein responses caused by MED17 mutations. *Neurogenetics* 22: 353-357.

RESEARCH USE

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