

# Makorin-4 (D-15): sc-68212

## BACKGROUND

The Makorins are a family of proteins containing two to four C<sub>3</sub>H zinc fingers that may confer RNA-binding. In addition, they contain C<sub>3</sub>HC<sub>4</sub> RING zinc finger that allows them to function as E3 ubiquitin ligases. Makorin-4, also known as MKRNP5 (Makorin RING finger protein pseudogene 5), RNF64 or ZNF127L1, is a 485 amino acid protein that contains one RING-type zinc finger and four C<sub>3</sub>H<sub>1</sub>-type zinc fingers through which it may convey E3 ubiquitin ligase activity. The gene encoding Makorin-4 maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination, as an X and a Y chromosome lead to normal male development, while two copies of an X chromosome lead to normal female development. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

## REFERENCES

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- Bernardino-Sgherri, J., et al. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. *Cytogenet. Genome Res.* 99: 85-91.
- Muntoni, F., et al. 2003. Dystrophin and mutations: one gene, several proteins, multiple phenotypes. *Lancet Neurol.* 2: 731-740.
- Cantagrel, V., et al. 2004. Disruption of a new X linked gene highly expressed in brain in a family with two mentally retarded males. *J. Med. Genet.* 41: 736-742.
- Stevenson, R.E. 2005. Advances in X-linked mental retardation. *Curr. Opin. Pediatr.* 17: 720-724.
- Deeb, S.S. 2005. The molecular basis of variation in human color vision. *Clin. Genet.* 67: 369-377.
- Kaneko, S., et al. 2006. Origin and evolution of processed pseudogenes that stabilize functional Makorin-1 mRNAs in mice, primates and other mammals. *Genetics* 172: 2421-2429.

## CHROMOSOMAL LOCATION

Genetic locus: MKRN4P (human) mapping to Xp22.33.

## SOURCE

Makorin-4 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Makorin-4 of human origin.

## 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.

## 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-68212 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68212 X, 200 µg/0.1 ml.

## APPLICATIONS

Makorin-4 (D-15) is recommended for detection of Makorin-4 of 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).

Makorin-4 (D-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Makorin-4: 53 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.