

KIAA2022 (N-15): sc-241507

BACKGROUND

KIAA2022 is a 1,516 amino acid protein that is highly expressed in both adult and fetal brain and is encoded by a gene which maps to human chromosome X. Chromosomal aberrations involving the KIAA2022 gene are associated with the development of severe mental retardation, suggesting a role for KIAA2022 in normal brain development and function. Human chromosome X, on which the KIAA2022 gene is localized, contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination. 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

- Givens, J.R., et al. 1975. Features of Turner's syndrome in women with polycystic ovaries. *Obstet. Gynecol.* 45: 619-624.
- 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.
- Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 300524. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Hayashi, T., et al. 2006. Novel form of a single X-linked visual pigment gene in a unique dichromatic color-vision defect. *Vis. Neurosci.* 23: 411-417.
- Augui, S., et al. 2007. Sensing X chromosome pairs before X inactivation via a novel X-pairing region of the Xic. *Science* 318: 1632-1636.

CHROMOSOMAL LOCATION

Genetic locus: KIAA2022 (human) mapping to Xq13.3; C77370 (mouse) mapping to X D.

SOURCE

KIAA2022 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KIAA2022 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.

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-241507 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KIAA2022 (N-15) is recommended for detection of KIAA2022 of human origin, C77370 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).

KIAA2022 (N-15) is also recommended for detection of KIAA2022 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KIAA2022 siRNA (h): sc-91334, C77370 siRNA (m): sc-141928, KIAA2022 shRNA Plasmid (h): sc-91334-SH, C77370 shRNA Plasmid (m): sc-141928-SH, KIAA2022 shRNA (h) Lentiviral Particles: sc-91334-V and C77370 shRNA (m) Lentiviral Particles: sc-141928-V.

Molecular Weight of KIAA2022: 168 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.

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.