

QKI (N-20): sc-103851

BACKGROUND

QKI, also known as HKQ, QK, QK3 or quaking, is a 341 amino acid protein that localizes to both the cytoplasm and the nucleus and contains one KH domain. Expressed in the frontal cortex of the brain, QKI functions as an RNA-binding protein that plays an important role in myelination and specifically binds to the RNA core sequence 5'-NACUAAAY-N(1,20)-UAAAY-3'. Additionally, QKI regulates pre-mRNA splicing, and mRNA export and is involved in protecting and promoting the stability of select mRNAs. QKI may be methylated by PRMT1 and may also be phosphorylated at its C-terminus, an event that decreases QKI mRNA-binding affinity. Defects or deletions in the gene encoding QKI are associated with astrocytic tumors and may be involved in the pathogenesis of schizophrenia. Multiple isoforms of QKI exist due to alternative splicing events.

REFERENCES

- Hardy, R.J., et al. 1996. Neural cell type-specific expression of QKI proteins is altered in quakingviable mutant mice. *J. Neurosci.* 16: 7941-7949.
- Ebersole, T.A., et al. 1996. The quaking gene product necessary in embryogenesis and myelination combines features of RNA binding and signal transduction proteins. *Nat. Genet.* 12: 260-265.
- Chen, T. and Richard, S. 1998. Structure-function analysis of QKI: a lethal point mutation in mouse quaking prevents homodimerization. *Mol. Cell. Biol.* 18: 4863-4871.
- Noveroske, J.K., et al. 2002. Quaking is essential for blood vessel development. *Genesis* 32: 218-230.
- Wu, J.I., et al. 2002. Function of quaking in myelination: regulation of alternative splicing. *Proc. Natl. Acad. Sci. USA* 99: 4233-4238.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609590. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Yamamoto, Y., et al. 2003. Retrotransposon-mediated restoration of *Chlorella* telomeres: accumulation of Zepp retrotransposons at termini of newly formed minichromosomes. *Nucleic Acids Res.* 31: 4646-4653.

CHROMOSOMAL LOCATION

Genetic locus: QKI (human) mapping to 6q26; Qk (mouse) mapping to 17 A1.

SOURCE

QKI (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of QKI 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.

Blocking peptide available for competition studies, sc-103851 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

QKI (N-20) is recommended for detection of QKI 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).

QKI (N-20) is also recommended for detection of QKI in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for QKI siRNA (h): sc-95183, QKI siRNA (m): sc-106468, QKI shRNA Plasmid (h): sc-95183-SH, QKI shRNA Plasmid (m): sc-106468-SH, QKI shRNA (h) Lentiviral Particles: sc-95183-V and QKI shRNA (m) Lentiviral Particles: sc-106468-V.

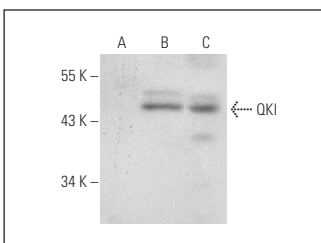
Molecular Weight of QKI: 45 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or QKI (h2): 293T Lysate: sc-369551.

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.

DATA



QKI (N-20): sc-103851. Western blot analysis of QKI expression in non-transfected 293T: sc-117752 (A), human QKI transfected 293T: sc-369551 (B) and K-562 (C) whole cell lysates.

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.