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Goat Anti-Quaking / QKI Antibody
Peptide-affinity purified goat antibody
Catalog # AF1890a

Specification

Goat Anti-Quaking / QKI Antibody - Product Information

Application	**WB, E**
Primary Accession	Q96PU8
Other Accession	NP_996737, 9444, 19317 (mouse)
Reactivity	**Mouse**
Predicted	**Human, Rat, Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**37671**

Goat Anti-Quaking / QKI Antibody - Additional Information

Gene ID 9444

Other Names
Protein quaking, Hqk, HqkI, QKI, HKQ

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-Quaking / QKI Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-Quaking / QKI Antibody - Protein Information

Name QKI {ECO:0000303|PubMed:16342280, ECO:0000312|HGNC:HGNC:21100}

Function
RNA reader protein, which recognizes and binds specific RNAs, thereby regulating RNA metabolic processes, such as pre-mRNA splicing, circular RNA (circRNA) formation, mRNA export, mRNA

stability and/or translation (PubMed:22398723, PubMed:23630077, PubMed:25768908, PubMed:27029405, PubMed:31331967, PubMed:37379838). Involved in various cellular processes, such as mRNA storage into stress granules, apoptosis, lipid deposition, interferon response, glial cell fate and development (PubMed:25768908, PubMed:31829086, PubMed:34428287, PubMed:37379838). Binds to the 5'-NACUAAY-N(1,20)-UAAY-3' RNA core sequence (PubMed:23630077). Acts as a mRNA modification reader that specifically recognizes and binds mRNA transcripts modified by internal N(7)-methylguanine (m7G) (PubMed:37379838). Promotes the formation of circular RNAs (circRNAs) during the epithelial to mesenchymal transition and in cardiomyocytes: acts by binding to sites flanking circRNA-forming exons (PubMed:25768908). CircRNAs are produced by back- splicing circularization of pre-mRNAs (PubMed:25768908). Plays a central role in myelinization via 3 distinct mechanisms (PubMed:16641098). First, acts by protecting and promoting stability of target mRNAs such as MBP, SIRT2 and CDKN1B, which promotes oligodendrocyte differentiation (By similarity). Second, participates in mRNA transport by regulating the nuclear export of MBP mRNA (By similarity). Finally, indirectly regulates mRNA splicing of MAG pre- mRNA during oligodendrocyte differentiation by acting as a negative regulator of MAG exon 12 alternative splicing: acts by binding to HNRNPA1 mRNA splicing factor, preventing its translation (By similarity). Involved in microglia differentiation and remyelination by regulating microexon alternative splicing of the Rho GTPase pathway (By similarity). Involved in macrophage differentiation: promotes monocyte differentiation by regulating pre-mRNA splicing in naive peripheral blood monocytes (PubMed:27029405). Acts as an important regulator of muscle development: required for the contractile function of cardiomyocytes by regulating alternative splicing of cardiomyocyte transcripts (By similarity). Acts as a negative regulator of thermogenesis by decreasing stability, nuclear export and translation of mRNAs encoding PPARGC1A and UCP1 (By similarity). Also required for visceral endoderm function and blood vessel development (By similarity). May also play a role in smooth muscle development (PubMed:31331967). In addition to its RNA-binding activity, also acts as a nuclear transcription coactivator for SREBF2/SREBP2 (By similarity).

Cellular Location
Nucleus. Cytoplasm [Isoform QKI6]: Cytoplasm, cytosol. Nucleus Note=Localizes predominantly in the cytoplasm and at lower levels in nucleus.

Tissue Location
Expressed in the frontal cortex of brain. Down- regulated in the brain of schizophrenic patients

Goat Anti-Quaking / QKI Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot

- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-Quaking / QKI Antibody - Images

AF1890a (0.3 µg/ml) staining of mouse brain lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-Quaking / QKI Antibody - Background

QKI belongs to a family of RNA-binding proteins that have an HNRNPK (MIM 600712) homology (KH) domain embedded in a 200-amino acid region called the GSG domain. Other members of this family include SAM68 (KHDRBS1; MIM 602489) and SF1 (MIM 601516) (Chen and Richard, 1998 [PubMed 9671495]). QKI proteins regulate RNA splicing, export of target RNAs from the nucleus, translation of proteins, and RNA stability (Lauriat et al., 2008 [PubMed 17918747]).

Goat Anti-Quaking / QKI Antibody - References

RNA-binding protein quaking, a critical regulator of colon epithelial differentiation and a suppressor of colon cancer. Yang G, et al. Gastroenterology, 2010 Jan. PMID 19686745.
Defining the human deubiquitinating enzyme interaction landscape. Sowa ME, et al. Cell, 2009 Jul 23. PMID 19615732.
Characterization of QKI gene expression, genetics, and epigenetics in suicide victims with major depressive disorder. Klempan TA, et al. Biol Psychiatry, 2009 Nov 1. PMID 19545858.
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Genome-wide association scan identifies candidate polymorphisms associated with differential response to anti-TNF treatment in rheumatoid arthritis. Liu C, et al. Mol Med, 2008 Sep-Oct. PMID 18615156.