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KD-Validated Anti-QKI Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1459

Specification

KD-Validated Anti-QKI Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q96PU8
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 38 kDa , observed, 38 kDa KDa**
Gene Name	**QKI**
Aliases	**QKI; QKI, KH Domain Containing RNA Binding; QK3; KH Domain-Containing RNA-Binding Protein QKI; HqkI; Hqk; Homolog Of Mouse Quaking QKI (KH Domain RNA Binding Protein); Quaking Homolog, KH Domain RNA Binding (Mouse); Quaking Homolog, KH Domain RNA Binding; QKI/LOC100132735 Fusion; RNA Binding Protein HQK; Protein Quaking; QK1; HKQ; QK**
Immunogen	**A synthesized peptide derived from human QK1**

KD-Validated Anti-QKI Rabbit Monoclonal Antibody - Additional Information

Gene ID	**9444**

Other Names
KH domain-containing RNA-binding protein QKI, Protein quaking, Hqk, HqkI, QKI {ECO:0000303|PubMed:16342280, ECO:0000312|HGNC:HGNC:21100}

KD-Validated Anti-QKI Rabbit Monoclonal 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

KD-Validated Anti-QKI Rabbit Monoclonal 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

KD-Validated Anti-QKI Rabbit Monoclonal Antibody - Images

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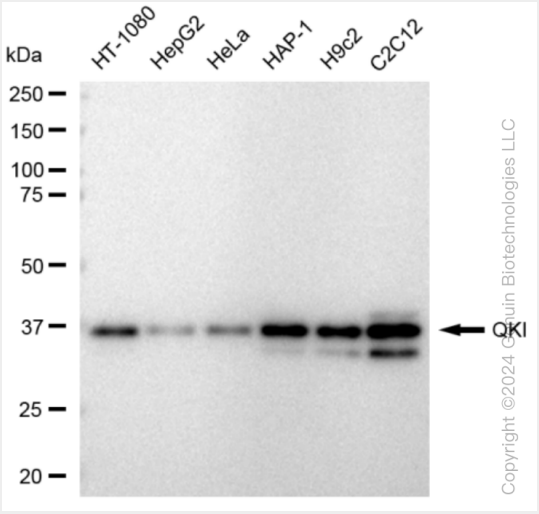
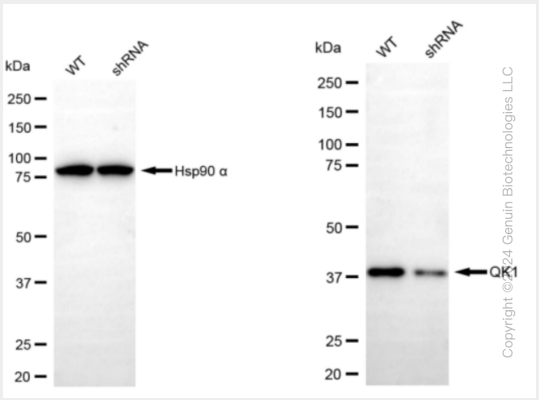
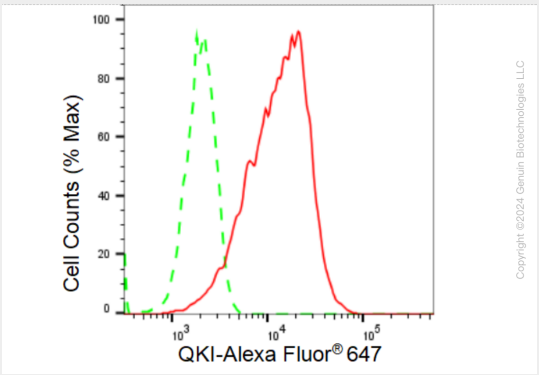


Western blotting analysis using anti-QKI antibody (Cat#AGI1459). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-QKI antibody (Cat#AGI1459, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-QK1 antibody (Cat#AGI1459). QK1 expression in wild type (WT) and QK1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-QK1 antibody (Cat#AGI1459, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of QKI expression in C2C12 cells using QKI antibody (Cat#AGI1459, 1:2000). Green, isotype control; red, QKI.

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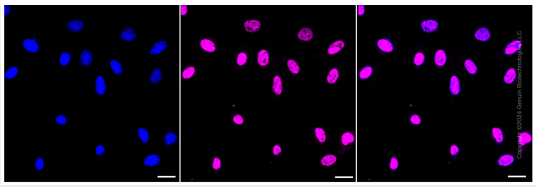

Immunocytochemical staining of C2C12 cells with QKI antibody (Cat#AGI1459, 1:1,000). Nuclei were stained blue with DAPI; QKI was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.