

AQR (Q-16): sc-167110

BACKGROUND

AQR (aquarius homolog), also known as intron-binding protein aquarius or IBP160 (intron-binding protein of 160 kDa), is a 1,485 amino acid intron-binding spliceosomal protein that consists of a helicase domain and belongs to the CWF11 family. Encoded by a gene that maps to human chromosome 15q14, AQR localizes to nucleus and speckle-like regions of nucleoplasm, and shares significant similarity with mouse. AQR is highly expressed in kidney and moderately in ovary, heart, brain, placenta, lung, liver and skeletal muscle, with expression greatly induced by retinoic acid *in vitro*. AQR is necessary for linking pre-mRNA splicing and snoRNP (small nucleolar ribonucleoprotein) biogenesis and plays a key role in position-dependent assembly of intron-encoded box C/D small snoRNP, possibly assisting in snoRNA sequence folding. AQR binds to introns of pre-mRNAs in a sequence-independent manner, between snoRNA and intron branchpoints, during final splicing periods.

REFERENCES

1. Sam, M., et al. 1998. Aquarius, a novel gene isolated by gene trapping with an RNA-dependent RNA polymerase motif. *Dev. Dyn.* 212: 304-317.
2. Hirose, T., et al. 2006. A spliceosomal intron binding protein, IBP160, links position-dependent assembly of intron-encoded box C/D snoRNP to pre-mRNA splicing. *Mol. Cell* 23: 673-684.
3. Ideue, T., et al. 2007. Introns play an essential role in splicing-dependent formation of the exon junction complex. *Genes Dev.* 21: 1993-1998.
4. Kuraoka, I., et al. 2008. Isolation of XAB2 complex involved in pre-mRNA splicing, transcription, and transcription-coupled repair. *J. Biol. Chem.* 283: 940-950.
5. Brown, J.W., et al. 2008. Intronic noncoding RNAs and splicing. *Trends Plant Sci.* 13: 335-342.

CHROMOSOMAL LOCATION

Genetic locus: AQR (human) mapping to 15q14; Aqr (mouse) mapping to 2 E4.

SOURCE

AQR (Q-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AQR of mouse 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-167110 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

AQR (Q-16) is recommended for detection of AQR of human and mouse 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).

Suitable for use as control antibody for AQR siRNA (h): sc-90163, AQR siRNA (m): sc-141182, AQR shRNA Plasmid (h): sc-90163-SH, AQR shRNA Plasmid (m): sc-141182-SH, AQR shRNA (h) Lentiviral Particles: sc-90163-V and AQR shRNA (m) Lentiviral Particles: sc-141182-V.

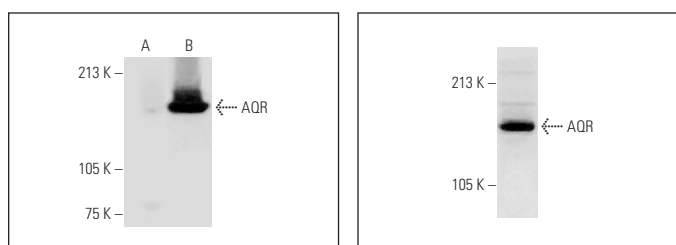
Molecular Weight of AQR: 160 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or AQR (m): 293T Lysate: sc-126432.

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



AQR (Q-16): sc-167110. Western blot analysis of AQR expression in non-transfected: sc-117752 (A) and mouse AQR transfected: sc-126432 (B) 293T whole cell lysates.

AQR (Q-16): sc-167110. Western blot analysis of AQR expression in MCF7 whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.