

Aquaporin 4 Monoclonal Antibody(4H1)

Catalog No :	YM3062
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF
Target :	AQP4
Fields :	>>Vasopressin-regulated water reabsorption;>>Bile secretion
Gene Name :	AQP4
Protein Name :	Aquaporin-4
Human Gene Id :	361
Human Swiss Prot No :	P55087
Mouse Gene Id :	11829
Mouse Swiss Prot No :	P55088
Rat Gene Id :	25293
Rat Swiss Prot No :	P47863
Immunogen :	Synthetic Peptide of Aquaporin 4
Specificity :	The antibody detects endogenous Aquaporin 4 proteins.
Formulation :	PBS, pH 7.4, containing 0.5%BSA, 0.02% sodium azide as Preservative and 50% Glycerol.
Source :	Monoclonal, Mouse
Dilution :	WB 1:1000 IF 1:100-200 IHC 1:50-300

Purification : The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.

Storage Stability : -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band : 48kD

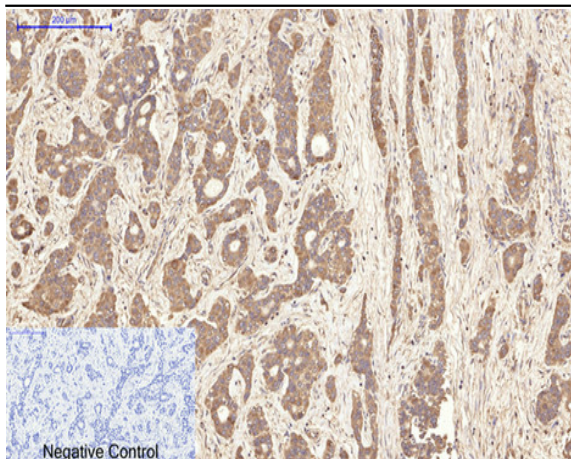
Background : This gene encodes a member of the aquaporin family of intrinsic membrane proteins that function as water-selective channels in the plasma membranes of many cells. This protein is the predominant aquaporin found in brain and has an important role in brain water homeostasis. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. A recent study provided evidence for translational readthrough in this gene and expression of an additional C-terminally extended isoform via the use of an alternative in-frame translation termination codon. [provided by RefSeq, Dec 2015],

Function : domain:Aquaporins contain two tandem repeats each containing three membrane-spanning domains and a pore-forming loop with the signature motif Asn-Pro-Ala (NPA).,function:Forms a water-specific channel. Osmoreceptor which regulates body water balance and mediates water flow within the central nervous system.,similarity:Belongs to the MIP/aquaporin (TC 1.A.8) family.,tissue specificity:Brain - muscle >> heart, kidney, lung, and trachea.,

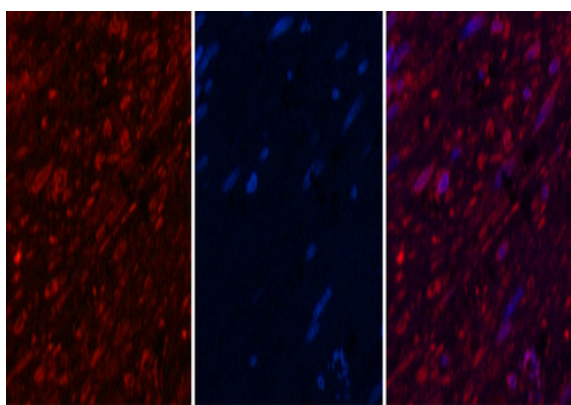
Subcellular Location : Cell membrane ; Multi-pass membrane protein . Basolateral cell membrane ; Multi-pass membrane protein . Endosome membrane . Cell membrane, sarcolemma ; Multi-pass membrane protein . Cell projection . Activation of the vasopressin receptor AVPR1A triggers AQP4 phosphorylation at Ser-180 and promotes its internalization from the cell membrane. Detected on brain astrocyte processes and astrocyte endfeet close to capillaries. .

Expression : Detected in skeletal muscle (PubMed:29055082). Detected in stomach, along the glandular base region of the fundic gland (at protein level) (PubMed:8601457). Detected in brain, lung and skeletal muscle, and at much lower levels in heart and ovary (PubMed:7559426, PubMed:8601457).

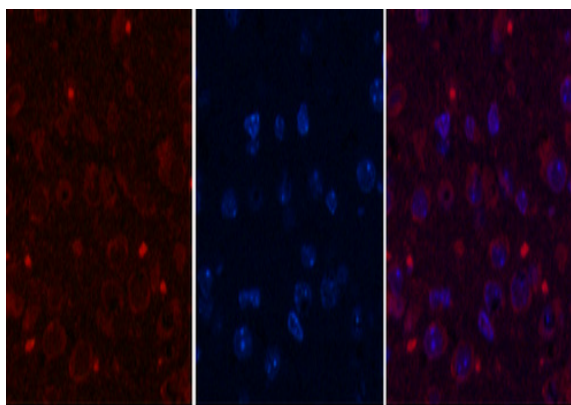
Products Images



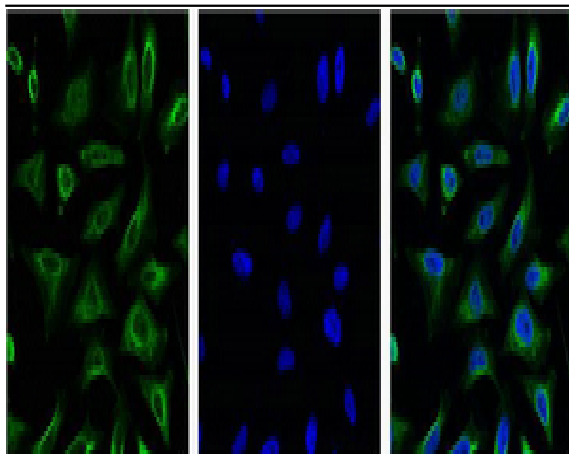
Immunohistochemical analysis of paraffin-embedded Human-liver-cancer tissue. 1, Aquaporin 4 Monoclonal Antibody(4H1) was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



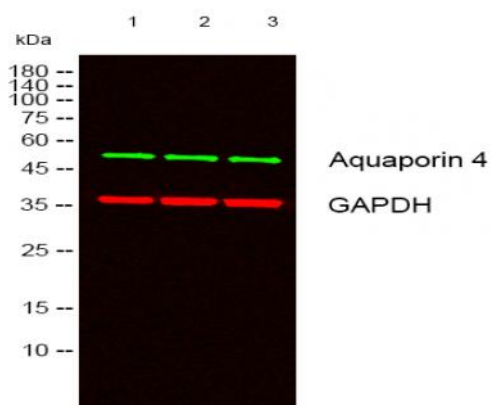
Immunofluorescence analysis of Human-appendix tissue. 1, Aquaporin 4 Monoclonal Antibody(4H1)(red) was diluted at 1:200(4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min). 3, Picture B: DAPI(blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Immunofluorescence analysis of Mouse-brain tissue. 1, Aquaporin 4 Monoclonal Antibody(4H1)(red) was diluted at 1:200(4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min). 3, Picture B: DAPI(blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



IF analysis of HeLa with antibody (Left) and DAPI (Right) diluted at 1:100.



Western blot analysis of lysates from 1) HeLa, 2) Mouse Heart tissue, 3) Rat Heart Tissue cells, (Green) primary antibody was diluted at 1:1000, 4° over night, secondary antibody (cat:RS23910) was diluted at 1:10000, 37° 1 hour. (Red) GAPDH Polyclonal Antibody (cat:YM3215) antibody was diluted at 1:5000 as loading control, 4° over night, secondary antibody (cat:RS23720) was diluted at 1:10000, 37° 1 hour.