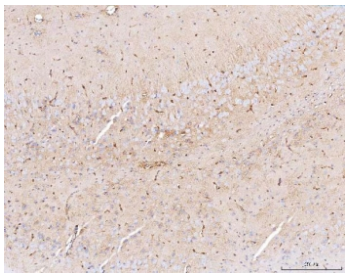
Aquaporin 4 Antibody / AQP4 (RQ7058)

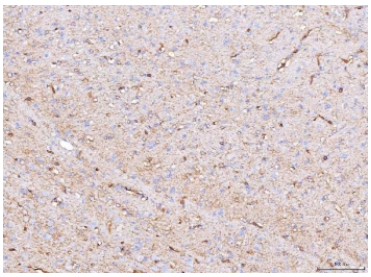
Catalog No.	Formulation	Size
RQ7058	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

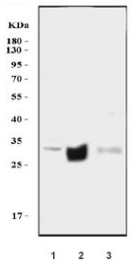
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P55087
Localization	Cytoplasm, cell membrane
Applications	Western Blot : 0.5-1 ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This Aquaporin 4 antibody is available for research use only.



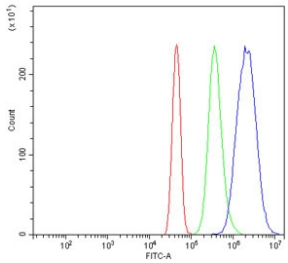
IHC staining of FFPE mouse brain tissue with Aquaporin 4 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE rat brain tissue with Aquaporin 4 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of 1) human U-87 MG, 2) rat brain and 3) mouse brain tissue lysate with Aquaporin 4 antibody. Observed molecular weight: 35-45 kDa depending on glycosylation level.



Flow cytometry testing of human A431 cells with Aquaporin 4 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Aquaporin 4 antibody.

Description

Aquaporin 4 is found in the basolateral cell membrane of principal collecting duct cells and provides a pathway for water to exit these cells. The gene of AQP4 is mapped to 18q11.2-q12.1. Similar to other aquaporins, the AQP4 gene is composed of 4 exons encoding 127, 55, 27, and 92 amino acids separated by introns of 0.8, 0.3, and 5.2 kb. Unlike other aquaporins, an alternative coding initiation sequence (designated exon 0) was located 2.7 kb upstream of exon 1. When spliced together, M1 and the subsequent 10 amino acids are encoded by exon 0; the next 11 amino acids and M23 are encoded by exon 1. AQP4 is expressed in astrocytes and is upregulated by direct insult to the central nervous system. And AQP4 is the predominant water channel in the brain and has an important role in brain water homeostasis. It is abundant in mammalian brain and is concentrated in astrocytic foot processes at the blood-brain barrier.

Application Notes

Optimal dilution of the Aquaporin 4 antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids L247-V323) was used as the immunogen for the Aquaporin 4 antibody.

Storage

After reconstitution, the Aquaporin 4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.