BOSTER BIOLOGICAL TECHNOLOGY
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Anti-AQP2 Antibody (Monoclonal, 32A23)

Catalog Number: M00935

About AQP2

AQP2 (Aquaporin 2), also called AQUAPORIN-CD, is found in the apical cell membranes of the kidney's collecting duct principal cells and in intracellular vesicles located throughout the cell. The AQP2 gene is mapped to chromosome 12q13, very close to the site of major intrinsic protein by situ hybridization. The investigators suggested that a defect in the AQP2 gene is the basis of the autosomal form of nephrogenic diabetes insipidus. The functional expression and the limited localization suggested that AQP2 is the vasopressin-regulated water channel. Using rat kidney slices and porcine kidney cells stably expressing rat Aqp2, AQP2 trafficking can be stimulated by cAMP-independent pathways that utilize nitric oxide (NO). The NO donors sodium nitroprusside (SNP) and NONOate and the NO synthase substrate L-arginine mimicked the effect of vasopressin (VP), stimulating relocation of Aqp2 from cytoplasmic vesicles to the apical plasma membrane. SNP increased intracellular cGMP rather than cAMP, and exogenous cGMP stimulated AQP2 membrane insertion. Atrial natriuretic factor, which signals via cGMP, also stimulated AQP2 translocation. AQP2 expression in kidney connecting tubules is sufficient for survival and that AQP2 expression in collecting ducts is required to regulate body water balance. The S256L substitution in the cytoplasmic tail of the Aqp2 protein prevented phosphorylation at S256 and the subsequent accumulation of Aqp2 on the apical membrane of the collecting duct principal cells.

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Overview

Product Name	Anti-AQP2 Antibody (Monoclonal, 32A23)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-AQP2 Antibody (Monoclonal, 32A23) catalog # M00935. Tested in IHC, IF applications. This antibody reacts with Human, Mouse, Rat.
Application	IF, IHC
Clonality	Monoclonal 32A23
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit

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Uniprot ID	P41181

Technical Details

Immunogen	Recombinant protein within human Aquaporin 2 aa 217-261.
Form	Liquid
Concentration	500 ug/ml
Purification	Protein A affinity purified.
Suggested Dilutions	Immunohistochemistry, 1:50-200 Immunofluorescence, 1:50-200

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For Research Use Only. Not for use in diagnostic procedures.