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[Marker Primary Antibody]

Rabbit Anti-phospho-AQP2 (Ser256)/FITC Conjugated antibody

Catalog Number: SL12507R-FITC

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-phospho-AQP2 (Ser256)/FITC
Immunogen:	KLH conjugated synthesised phosphopeptide derived from human AQP2 around the phosphorylation site of Ser256
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Dog(predicted:Mouse,Rat,Chicken,Pig,Cow,Horse,Rabbit,Monkey)
Subcellular Location:	The cell membrane
Background:	background: Aquaporins (AQPs) are a large family of integral membrane water transport channel proteins that facilitate the transport of water through the cell membrane. This function is conserved in animals, plants and bacteria. Many isoforms of aquaporin have been identified in mammals, designated AQP0 through AQP10. Aquaporins are widely distributed and it is not uncommon for more than one type of AQP to be present in the same cell. Although most aquaporins are only permeable to water, AQP3, AQP7, AQP9 and one of the two AQP10 transcripts are also permeable to urea and glycerol. AQP2 is the only water channel that is activated by vasopressin to enhance water reabsorption in the kidney collecting duct. Aquaporins are involved in renal water absorption, generation of pulmonary secretions, lacrimation, and the secretion and reabsorption of cerebrospinal fluid and aqueous humor. **Function:** Forms a water-specific channel that provides the plasma

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	membranes of renal collecting duct with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient. **Subcellular Location:** Apical cell membrane. Cytoplasmic vesicle membrane. Shuttles from vesicles to the apical membrane. **Tissue Specificity:** Expressed in renal collecting tubules. **Post-translational modifications:** Ser-256 phosphorylation is necessary and sufficient for expression at the apical membrane. Endocytosis is not phosphorylation-dependent. DISEASE: Defects in AQP2 are the cause of diabetes insipidus nephrogenic autosomal (ANDI) [MIM:125800]; also known as diabetes insipidus nephrogenic type 2. ANDI is caused by the inability of the renal collecting ducts to absorb water in response to arginine vasopressin. It is characterized by excessive water drinking (polydypsia), excessive urine excretion (polyuria), persistent hypotonic urine, and hypokalemia. Inheritance can be autosomal dominant or recessive. **Similarity:** Belongs to the MIP/aquaporin (TC 1.A.8) family. **Database links:** **Entrez Gene:** 359 Human **Entrez Gene:** 11827 Mouse **Entrez Gene:** 25386 Rat Omim: 107777 Human **SwissProt:** P41181 Human **SwissProt:** P56402 Mouse **SwissProt:** P34080 Rat **Unigene:** 130730 Human **Unigene:** 20206 Mouse **Unigene:** 90076 Rat Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.