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Datasheet for 612-401-D09

# Aquaporin 2 phospho S264 Antibody

## Overview

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| **Description:** | Anti-Aquaporin 2 pS264 (RABBIT) Antibody - 612-401-D09 |
| **Item No.:** | 612-401-D09 |
| **Size:** | 100 µL |
| **Applications:** | IHC, WB |
| **Reactivity:** | Rat |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | Aquaporin 2 antibody recognizes aquaporin 2 (AQP2) which is a hormonally regulated water channel located in the renal collecting duct. Mutations in the AQP2 gene cause hereditary nephrogenic diabetes insipidus in humans. A vasopressin induced cAMP increase results in the phosphorylation of AQP2 at serine-256 and its translocation from the intracellular vesicles to the apical membrane of principal cells. Recently, serine-264 has been identified as a novel phosphorylation site on AQP2 and shown to be regulated by vasopressin thus implicating this site as important in AQP2 trafficking and subcellular distribution. Anti-Aquaporin 2 pS264 antibody is ideal for investigators involved in Cell Signaling, Neuroscience, Signal Transduction research. |
| **Synonyms:** | ADH water channel, Aquaporin-CD, Collecting duct water channel protein, WCH-CD, Water channel protein for renal collecting duct |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | Aqp2 |
| **Reactivity:** | Rat |
| **PTM Specificity:** | Phosphorylation |
| **Immunogen Type:** | Conjugated Peptide |

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| **Immunogen:** | Anti-Aquaporin 2 pS264 Antibody was produced by repeated immunizations with synthetic phospho-peptide corresponding to amino acid residues surrounding Ser264. |
| **Purity/Specificity:** | Anti-Aquaporin 2 pS264 Antibody is directed against rat Aquaporin 2 protein phosphorylated at S264. The antibody was prepared from monospecific antiserum by immunoaffinity chromatography using phospho peptide coupled to agarose beads followed by solid phase adsorption(s) against non-phospho peptide and non-specific peptide to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum. Minimal reactivity occurs against non-phosphorylated Aquaporin 2. Reactivity against Aquaporin 2 occurs from rat sources. However, reactivity is also expected against the following species based on 100% sequence homology: canine, bovine, chicken, human, mouse and non-human primate. |
| **Relevant Links:** | • UniProtKB - P34080<br>• GeneID - 25386<br>• UniProtKB - P34080.1 |

## Application Details

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| **Tested Applications:** | IHC, WB |
| **Application Note:** | Anti-Aquaporin 2 pS264 antibody is tested for use in ELISA, Western Blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 29 kDa in size corresponding to AQP2 protein phosphorylated at Ser264 in the appropriate cell lysate or extract. This antibody also recognizes the glycosylated form of aquaporin 2 protein at approximately 37 kDa in size. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:10,000 |
| **WB:** | 1:1000 |

## Formulation

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| **Physical State:** | Liquid |
| **Buffer:** | 0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5 |
| **Stabilizer:** | 0.1 mg/ml Bovine Serum Albumin (BSA) - IgG and Protease free, 50% (v/v) Glycerol |

## Shipping & Handling

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| **Shipping Condition:** | Dry Ice |

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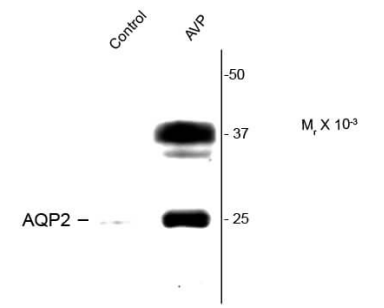
| **Storage Condition:** | Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

## Images




Western blot of vasopressin (AVP) treated rat kidney lysate showing specific immunolabeling of the ~ 29k and 37k glycosylated form of the AQP2 protein phosphorylated at Ser264.

**Western Blot**

Western Blot of Rabbit Anti-Aquaporin 2 pS264 antibody. Lane 1: rat kidney lysate. Lane 2: rat kidney lysate treated with vasopressin (AVP). Load: 10 µg per lane. Primary antibody: AQP2 antibody at 1:400 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~ 29kDa and 37kDa glycosylated form of the AQP2 protein phosphorylated at Ser264. Other band(s): none.

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.