BOSTER
antibody and ELISA experts

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Anti-Vasopressin V1a receptor AVPR1A Antibody Picoband®

Catalog Number: PA2248

About Avpr1a

Arginine vasopressin receptor 1A (officially called AVPR1A) is one of the three major receptor types for arginine vasopressin (AVPR1B and AVPR2 being the others). It belongs to the subfamily of G-protein coupled receptors which includes AVPR1B, V2R and OXT receptors. This gene is mapped to 12q14.2. AVPR1A is present throughout the brain, as well as in the periphery, in the liver, kidney, and vasculature. The protein encoded by this gene acts as receptor for arginine vasopressin. Its activity is mediated by G proteins which stimulate a phosphatidylinositol-calcium second messenger system. The receptor mediates cell contraction and proliferation, platelet aggregation, release of coagulation factor and glycogenolysis.

Overview

Product Name	Anti-Vasopressin V1a receptor AVPR1A Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Vasopressin V1a receptor AVPR1A Antibody catalog # PA2248. Tested in WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3. *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 from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P30560

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of rat AVPR1A, different from the related human and mouse sequences by one amino acid.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.

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Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Rat, Mouse

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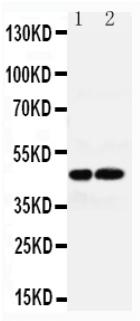
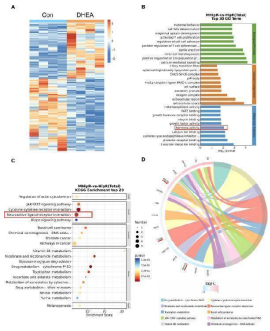
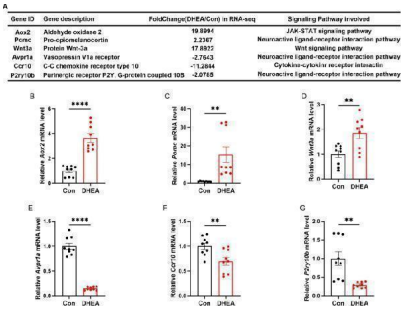
Anti-Vasopressin V1a receptor AVPR1A Antibody Picoband® (PA2248) Images



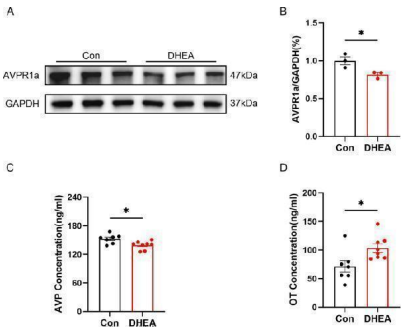
Anti-AVPR1A antibody, PA2248, All Western blottingAll lanes: Anti-AVPR1A(PA2248) at 0.5ug/ml Lane 1: Rat Liver Tissue Lysate at 40ug Lane 2: Rat Kidney Tissue Lysate at 40ug Predicted bind size: 47KD Observed bind size: 47KD



RNA-seq reveals key molecular signatures in hippocampal tissue of DHEA-treated mice. A Cluster heatmap of differentially expressed genes between the control and DHEA-treated groups. B The total GO term analysis (Top 20) revealed that hormone activity was prioritized. C The total KEGG enrichment analysis (Top 20) showed that neuroactive ligand-receptor interaction was significantly enriched. D KEGG enrichment analysis using chord diagrams revealed several genes, such as Avpr1a, in the neuroactive ligand-receptor interaction pathway Index in PubMed under a CC BY license. PMID: 40437391



Expression of candidate differential genes was verified by qRT-PCR in female mouse hippocampal tissues. A Candidate genes and the signaling pathways they are involved in. B-G mRNA expression levels of Aox2 , Pomc , Wnt3a , Avpr1a , Ccr10 , and P2ry10b as determined by qRT-PCR (n = 9). The data are shown as the mean ± SEM. An unpaired Student’s t-test was used for statistical analysis, and the experiment was repeated three times independently with similar results. * indicates p < 0.05, ** indicates p < 0.01, **** indicates p < 0.0001 Index in PubMed under a CC BY license. PMID: 40437391



DHEA decreased the activity of the AVP system in the hippocampus. A Protein levels of AVPR1a in the hippocampal tissue detected by western blot (DHEA-treated vs. Control, n = 3). B Relative quantification of AVPR1a protein in the hippocampus of female mice in the DHEA-treated (n = 3) and control (n = 3) groups. C-D The content of AVP and OT in the hippocampus tissues of female mice in the DHEA-treated (n = 7–8) and control (n = 7–8) groups, as determined by ELISA. The data are shown as the mean ± SEM. An unpaired Student’s t-test was used for statistical analysis, and the experiment was repeated three times independently with similar results, * indicates p < 0.05 Index in PubMed under a CC BY license. PMID: 40437391

DHEA regulates Avpr1a transcription directly through AR. A Experimental design for ChIP-PCR. The yellow fan indicates

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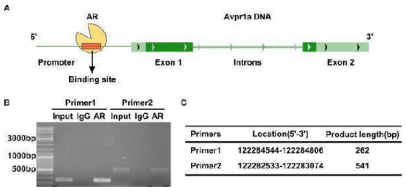
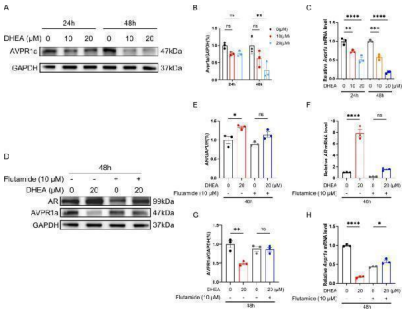


the androgen receptor (AR). The long green line represents the Avpr1a DNA. The red rectangle indicates the binding site of the androgen to the Avpr1a promoter. B Electropherogram of a ChIP-PCR experiment. The bands in the AR group were more intense and more specific than those in the IgG group using the two primers in the PCR process. C Sequences of the primers for ChIP-PCR. The experiment was repeated three times independently with similar results Index in PubMed under a CC BY license. PMID: 40437391



DHEA inhibited AVPR1a expression in HT22 cells via AR. A The expression of AVPR1a protein in HT22 cells treated with DHEA at different concentrations (0 μM, 10 μM and 20 μM) for different durations (24 h and 48 h) was detected by western blot. B , C The relative expression of AVPR1a protein (B) and mRNA (C) in HT22 cells treated with different concentrations (0 μM, 10 μM, and 20 μM) of DHEA for different periods (24 h and 48 h). D The expression of AVPR1a protein in DHEA-treated HT22 cells after antagonist pretreatment was detected by western blot. E , F The relative expression of AR protein (E) and mRNA (F) in DHEA-treated HT22 cells after antagonist pretreatment. G , H The relative expression of AVPR1a protein (G) and mRNA (H) in DHEA-treated HT22 cells after antagonist pretreatment. The data are shown as the mean ± SEM. Two-way ANOVA followed by Tukey's post hoc test was used for Fig. 6B-C and one-way ANOVA followed by Tukey's post hoc test was used for Fig. 6E-F, G-H, and the experiment was repeated three times independently with similar results. * indicates $p < 0.05$, ** indicates $p < 0.01$, *** indicates $p < 0.001$, **** indicates $p < 0.0001$, ns indicates no significant difference Index in PubMed under a CC BY license. PMID: 40437391

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