

INDIGO Biosciences Releases Luciferase Reporter Assays for Arginine Vasopressin Receptors AVPR1A, AVPR1B, and AVPR2

New Assays Empower Research into Cardiovascular Health, Neuropsychiatric Disorders, and Water Balance Regulation

STATE COLLEGE, PENNSYLVANIA, UNITED STATES, August 23, 2024 /EINPresswire.com/ -- INDIGO Biosciences, a leading innovator in cellbased reporter assays, is excited to announce the launch of a new family of G-Protein Coupled Receptor (GPCR) assays: the Arginine Vasopressin Receptor (AVPR) Reporter Assays for AVPR1A, AVPR1B, and AVPR2.

"These new assays provide researchers with robust tools to explore the functional interactions of compounds with key vasopressin receptors," said



Bruce Sherf, Chief Technology Officer at INDIGO Biosciences. "AVPRs play crucial roles in regulating cardiovascular function, water balance, and social behavior, making them significant targets in a wide variety of drug discovery efforts. Our assays will aid in the development of novel therapeutics for conditions ranging from heart disease and water balance disorders to neuropsychiatric conditions."

The three receptor subtypes within the AVPR family—AVPR1A, AVPR1B, and AVPR2—each have distinct physiological roles. AVPR1A is primarily involved in vasoconstriction and social behaviors, AVPR1B plays a role in stress response and social interaction, while AVPR2 is critical for water reabsorption in the kidneys and blood pressure regulation.

INDIGO's AVPR Reporter Assays are designed to offer drug discovery researchers a highly sensitive and specific platform to investigate AVPR activation or inhibition. The assays enable the screening of large compound libraries, allowing researchers to identify AVPR agonists,

antagonists, and modulators efficiently. INDIGO's assays also allow researchers to counter screen their compounds of interest against an extensive portfolio of nuclear receptors, GPCRs, growth factor receptors, and cytokine receptors to identify unwanted effects early in their discovery efforts.

"Our goal is to empower researchers with innovative tools that accelerate scientific discovery and improve human health," added Sherf. "With the launch of our AVPR1A, AVPR1B, and AVPR2 Reporter Assays, we are advancing the understanding and treatment of diseases associated with these critical receptors."

INDIGO's arginine vasopressin receptor assay kits contain all materials needed to perform the assay, including cryopreserved optimized reporter cells, media for use in recovering the cryopreserved cells and for diluting test samples, reference compound, luciferase detection reagent, a cell culture-ready assay plate, and a detailed protocol. By providing all necessary assay reagents in one easyto-use kit, INDIGO enables researchers to obtain high-quality data quickly. There is no need for researchers to procure individual components from multiple sources, painstakingly transfect and selectively propagate reporter cells, or optimize the assay.

Human AVPR1B, Activation Assays 70 --- Vasopressin $EC_{50} \sim 17 \text{ pM}$ 60 Z' = 0.76Felypressin 50 Terlipressin Fold-Activation Oxytocin 40 'Mock' Reporter Cells treated with Vasopressin 30 20. 10-0.0001 0.001 0.01 0.1 10 100 1,000 1 [Compounds], nM AVPR1B Activation Assay Human AVPR2, Activation Assay 50 45 40 35 Fold-Activation 30 25 Vasopressin EC50~3.1 pM 20 Z' = 0.76Felypressin 15 Terlipressin 10 Oxytocin 'Mock' Reporter 5 Cells treated with Vasopressin 0.0001 0.001 0.01 0.1 10 100 1.000 [Compounds], nM

AVPR2 Activation Assay

What also sets INDIGO kits apart is

their proprietary CryoMite[™] cryo-preservation process, which eliminates weeks of cell-culture work, allowing researchers to get reliable data quickly. This process allows scientists to immediately dispense healthy, division-competent reporter cells into the assay-ready plates.

There is no need for cumbersome intermediate treatment steps such as spin and rinse of cells, viability determinations, or cell titer adjustments prior to assay setup. Simply thaw and plate the reporter cells, add test compounds and detection reagents, and obtain assay results in as little as 24 hours.

INDIGO's Human Arginine Vasopressin Receptor (AVPR1A, AVPR1B, and AVPR2) assays are available as all-inclusive kits in 96-well and 384-well assay formats. Bulk volumes of assay reagents are also available to accommodate high throughput screening applications.

Researchers can also utilize INDIGO's assay services for the convenient and cost-effective outsourcing of their AVPR-related studies, ensuring access to high-quality data without the need for extensive in-house resources.

For more information about INDIGO's Human Arginine Vasopressin Receptor Assays and other products and services, visit indigobiosciences.com.

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