

OBESITY & DIABETES PRODUCT SOLUTIONS

ACCELERATE THE DEVELOPMENT OF PEPTIDE THERAPEUTICS FOR OBESITY & DIABETES WITH MOA-REFLECTIVE ASSAYS

Assays for Screening, Profiling, Potency, & Lot-release Programs

Obesity and Type 2 diabetes (T2D) are chronic diseases that affect >1 billion people globally. Several advancements in therapeutics to address these diseases have spurred a global surge in clinical development programs, focusing on innovator drugs, biosimilars, and small molecules targeting these receptors.

Eurofins DiscoverX® supports this evolving therapeutic landscape with a comprehensive portfolio of assays tailored for various peptide therapeutics directed at targeting GLP-1 (glucagon-like peptide-1), GIP (gastric inhibitory polypeptide), and glucagon (GCG) receptors, as well as numerous additional novel targets including TSH, PYY, Amylin, GPR10, GPR75, and more. These assays support various drug discovery and clinical development stages, as well as commercialization and stability studies facilitating precise bio-identity and potency testing.

Product Highlights

- **Qualified Bioassays** – ICH-based assay qualification using approved therapeutics like Ozempic® (semaglutide), Victoza® (liraglutide), tirzepatide, & molecules like retatrutide (under clinical trial)
- **Establish Accurate Pharmacology for Regulatory Filings** – Evaluate your therapeutics MOA for cAMP accumulation, β-arrestin recruitment, & receptor internalization
- **Assay Transfer Support** – Dedicated global team for end-to-end assay transfer of your commercial release & stability programs at CRO/CDMO sites
- **Cell Banking** – Customized, well-characterized thaw-&-use working cell banks to ensure long-term assay reproducibility & supply of the bioassay cells

GLP-1, GIP, & GLUCAGON ASSAYS FOR cAMP ACCUMULATION, β-ARRESTIN RECRUITMENT, RECEPTOR INTERNALIZATION, & LIGAND BINDING

Targets	Innovator Qualified Bioassays	Target-based Bioassays	eXpress™ Assay Kits	Stable Cell Lines
GLP-1R	<ul style="list-style-type: none"> • cAMP Hunter™ Exenatide Bioassay Kit (95-0062Y2-00101/102/192) • cAMP Hunter Semaglutide Bioassay Kit (95-0062Y2-00175/176) • cAMP Hunter Liraglutide Bioassay Kit (95-0062Y2-00099/100) • NEW cAMP Hunter Tirzepatide (GLP-1 RA) Bioassay Kit (95-0062Y2-00198/199/200) • Coming Soon cAMP Hunter Retatrutide Bioassay Kit 	<ul style="list-style-type: none"> • PathHunter® GLP1 (7-37) Bioassay Kit (93-0300Y2-00027/28) • NEW cAMP Hunter GLP-1 RA Bioassay Kit (95-0062Y2-00201/202/203) 	<ul style="list-style-type: none"> • cAMP Hunter eXpress GLP1R Assays (95-0062E2, 95-0179E3) • PathHunter eXpress GLP1R β-Arrestin Assays (93-0300E2, 93-0914E2, 93-0478E2, 93-0974E2) • PathHunter eXpress GLP1R Internalization Assays (93-1075E3, 93-0724E3) 	<ul style="list-style-type: none"> • cAMP Hunter GLP1R Gs Cell Lines (95-0062C2, 95-0179C3) • PathHunter GLP1R β-Arrestin Cell Lines (93-0300C2, 93-0914C2, 93-0478C2, 93-0974C2) • PathHunter GLP1R Internalization Cell Lines (93-1075C3, 93-0724C3)
			<p>Membrane Preparations</p> <ul style="list-style-type: none"> • ChemiScreen™ GLP1R Membrane Prep. (HTS163M) 	
GIPR	<ul style="list-style-type: none"> • NEW cAMP Hunter Tirzepatide (GIP RA) Bioassay Kit (95-0062Y2-00207/208/209) • Coming Soon cAMP Hunter Retatrutide Bioassay Kit 	<ul style="list-style-type: none"> • NEW cAMP Hunter GIP RA Bioassay Kit (95-0146Y2-00204/205/206) • PathHunter GIPR Bioassay Kit (inquire) 	<ul style="list-style-type: none"> • cAMP Hunter eXpress GIPR Assays (95-0146E2, 95-0154E2) • PathHunter eXpress GIPR β-Arrestin Assays (93-1095E2, 93-0846E3) 	<ul style="list-style-type: none"> • cAMP Hunter GIPR Gs Cell Lines (95-0146C2, 95-0154C2) • PathHunter GIPR β-Arrestin Cell Lines (93-1095C2, 93-0846C3)
			<p>Membrane Preparations</p> <ul style="list-style-type: none"> • ChemiScreen™ GIPR Membrane Prep. (HTS134M) 	
GCGR	<ul style="list-style-type: none"> • Coming Soon cAMP Hunter Retatrutide (GCG RA) Bioassay Kit 	<ul style="list-style-type: none"> • Coming Soon cAMP Hunter GCG RA Bioassay Kit • PathHunter GCGR Bioassay Kit (inquire) 	<ul style="list-style-type: none"> • cAMP Hunter eXpress GCGR Assay (95-0042E2) • PathHunter eXpress GCGR β-Arrestin Assays (93-0241E2, 93-0979E2, 93-0973E2) • PathHunter eXpress GCGR Internalization Assay (93-0820E1) 	<ul style="list-style-type: none"> • cAMP Hunter GCGR Gs Cell Line (95-0042C2) • PathHunter GCGR β-Arrestin Cell Lines (93-0241C2, 93-0575C2, 93-0979C2, 93-0973C2) • PathHunter GCGR Internalization Cell Line (93-0820C1)

RA = Receptor Agonist. MOA = Mechanism of Action. ICH = International Council for Harmonization of Tech. Requirements for Pharmaceuticals for Human Use. Contact us at discoverx.com/contact-us/ about the new, inquire, & coming soon products as well as orthologs, additional sizes, & thaw-&-use cell bank cells.

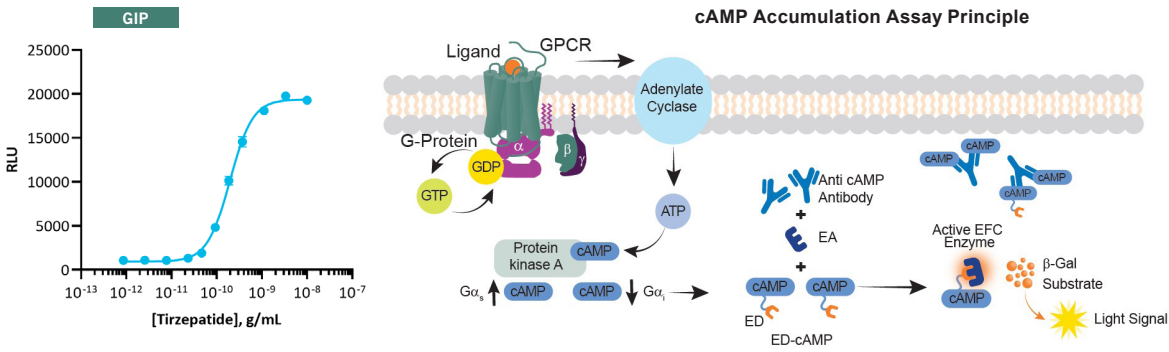
For more information on obesity & diabetes products, please visit → discoverx.com/therapeutic-area/obesity-diabetes



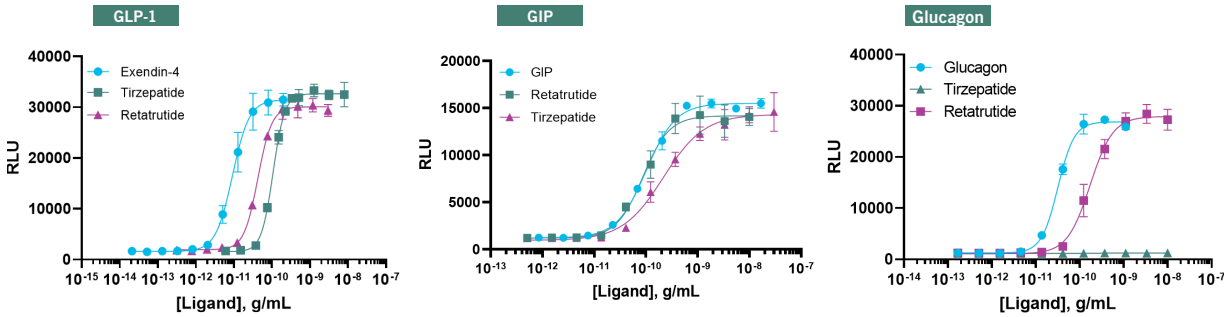
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Assays for Screening, Profiling, Potency, & Lot Release Programs

POTENCY TESTING USING THE cAMP HUNTER ASSAY FOR TIRZEPATIDE & RETATRUTIDE



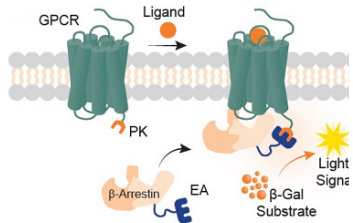
cAMP Hunter™ Tirzepatide Bioassay for GIP RA (receptor agonist) and GPCR cAMP accumulation assay principle based on Eurofins DiscoverX® enzyme fragment complementation technology. The bioassay was used to quantify cAMP accumulation in response to Tirzepatide and demonstrated a robust and sensitive dose-dependent increase in cAMP levels with signal-to-background of 20.8 and EC₅₀ of 196.3 pg/ml.



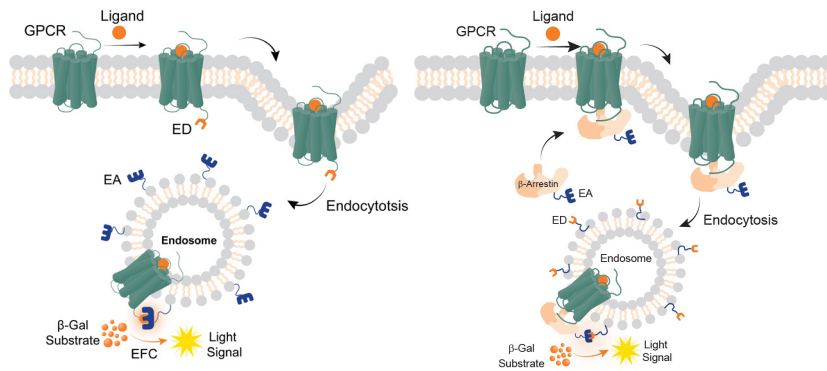
Thaw-and-use cAMP Hunter Retatrutide RA Bioassays demonstrate robust, sensitive, and differential retatrutide responses in cAMP levels reflective of the accurate pharmacology of drug responses at the GLP-1, GIP, and glucagon receptors.

GPCR BIASED SIGNALING EVALUATION OF RECEPTOR AGONIST AGAINST GLP-1, GIP, & GLUCAGON RECEPTORS

β-Arrestin Recruitment Assay Principle



Receptor Internalization (Total and Activated) Assay Principles



(top) Assay principles for β-arrestin recruitment and receptor internalization (total and activated).

(bottom) Comparison of β-arrestin recruitment by tirzepatide and retratrutide at respective target receptors with endogenous ligands (exendin-4 for GLP-1, GIP for GIPR, and glucagon for GCGR).

