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Ipamorelin + CJC-1295 No DAC (Combined Preparation)

A two-component lyophilized research preparation combining a selective ghrelin receptor (GHSR-1a) agonist with a truncated GHRH receptor agonist — the most commonly assembled dual-mechanism preparation engaging two G-protein-coupled receptors that converge synergistically on pituitary somatotroph growth hormone release.

CATALOG REFERENCE	FORM FACTOR	STRENGTH	DATE OF ISSUE
BM-LYO-020	Lyophilized vial	10 mg total (Ipamorelin 5 mg + CJC-1295 No DAC 5 mg)	May 2026

*This research preparation is a two-component lyophilized combination of **Ipamorelin** (a selective ghrelin receptor / growth hormone secretagogue receptor agonist developed at Novo Nordisk by Raun and colleagues) and **CJC-1295 (No DAC)** (a truncated tetrasubstituted analogue of growth hormone-releasing hormone developed at ConjuChem). The two compounds are co-lyophilized at 5 mg of each per 10 mg vial. The combination engages two mechanistically distinct receptor pathways that converge on pituitary somatotroph growth hormone release: Ipamorelin activates GHSR-1a (Class A GPCR, Gαq-coupled) while CJC-1295 (No DAC) activates GHRHR (Class B GPCR, Gαs-coupled). Simultaneous engagement of these two pathways in the same target cell produces synergistic — rather than additive — GH release in pituitary cell-culture preparations and rodent in-vivo studies. The "No DAC" variant of CJC-1295 (lacking the maleimide Drug Affinity Complex moiety) produces a pulsatile GH release profile more closely approximating endogenous somatotroph release dynamics, in contrast to the multi-day elevated plasma residence of CJC-1295 with DAC. **This monograph summarises published cellular pharmacology and preclinical findings for laboratory research reference only.***

01 Component Composition

COMPONENT A — IPAMORELIN	5 mg · Aib-His-D-2-Nal-D-Phe-Lys-NH_2 pentapeptide · selective GHSR-1a agonist · CAS 170851-70-4 · Raun / Novo Nordisk development
COMPONENT B — CJC-1295 NO DAC	5 mg · GHRH(1-29) truncated tetrasubstituted analogue with D-Ala^2/Gln^8/Ala^{15}/Leu^{27} substitutions · GHRHR agonist · CAS 863288-34-0 · ConjuChem development
TOTAL MASS PER VIAL	10 mg lyophilized solid
FORM FACTOR	Lyophilized vial · sterile water reconstitution
PHYSICAL FORM	White lyophilized solid co-lyophilizate
ANALYTICAL SPECIFICATION	Component-level ≥ 98 % purity by HPLC; composition verified by HPLC quantification (BIOMOD Labs internal release specification)

02 Rationale for Combined Composition

The Ipamorelin + CJC-1295 (No DAC) combination is the most commonly assembled dual-mechanism GH-axis preparation in published preclinical literature because the two compounds engage distinct G-protein-coupled receptors that converge on the same downstream physiological effector. **Ipamorelin** engages the growth hormone secretagogue receptor (GHSR-1a, also called the ghrelin receptor), a Class A GPCR coupling principally to Gαq with downstream phospholipase C activation, IP_3 / DAG / Ca^{2+} signalling, and ERK / MAPK pathway engagement. Ipamorelin is highly selective for GHSR-1a over the closely related melanocortin receptors and does not engage the prolactin or cortisol release pathways characteristic of less-selective GHRP-class compounds (Raun et al., *Eur J Endocrinol.* 1998, PMID 9849822). **CJC-1295 (No DAC)** engages the growth hormone-releasing hormone receptor (GHRHR), a Class B GPCR coupling principally to Gαs with downstream adenylyl cyclase activation, cAMP elevation, and PKA-mediated signalling in pituitary somatotrophs.

The simultaneous engagement of GHSR-1a and GHRHR in the same somatotroph cell produces synergistic GH release because the two pathways converge on different rate-limiting steps in vesicular GH exocytosis. The "No DAC" variant of CJC-1295 produces a pulsatile rather than sustained GH release profile, which is the preferred combination partner for Ipamorelin in research protocols aimed at characterising physiologically pulsatile somatotroph dynamics.

03 Critical Chemistry-Handling Notes for the Combined Preparation

MULTI-COMPONENT HANDLING CONSIDERATIONS

Both components of this preparation have relatively favourable chemistry-handling profiles. Neither contains an essential disulfide bond. Neither contains an exposed methionine residue (Ipamorelin contains no methionine; CJC-1295 retains a methionine at position 27 of the GHRH backbone — adjacent to but not at the activity-critical sites). Both are water-soluble. The principal handling consideration is that **Ipamorelin's selectivity for GHSR-1a over the closely related melanocortin receptors** can be reduced at very high concentrations — experimental designs should use Ipamorelin concentrations within the published selectivity-validated range. Light protection is not strictly required but is good practice given the aromatic residues in both compounds.

04 Laboratory Handling, Reconstitution, and Storage

Lyophilized solid storage at −18 °C, desiccated. Reconstitution in sterile water for injection or bacteriostatic water at neutral pH is standard practice. Reconstituted solutions held refrigerated 2–8 °C for short-term work; aliquoted long-term storage at −18 °C with minimised freeze–thaw. Working concentrations are determined by the investigator's experimental design.

05 References

1. Raun K, Hansen BS, Johansen NL, Thøgersen H, Madsen K, Ankersen M, Andersen PH. Ipamorelin, the first selective growth hormone secretagogue. *Eur J Endocrinol.* 1998;139(5):552–561. PMID: 9849822
2. Teichman SL, Neale A, Lawrence B, Gagnon C, Castaigne JP, Frohman LA. Prolonged stimulation of growth hormone (GH) and insulin-like growth factor I secretion by CJC-1295, a long-acting analog of GH-releasing hormone, in healthy adults. *J Clin Endocrinol Metab.* 2006;91(3):799–805. PMID: 16352683
3. Sinha DK, Balasubramanian A, Tatem AJ, Rivera-Mirabal J, Yu J, Kovac J, Pastuszak AW, Lipshultz LI. Beyond the androgen receptor: the role of growth hormone secretagogues in the modern management of body composition in hypogonadal males. *Transl Androl Urol.* 2020;9(Suppl 2):S149–S159. PMID: 32257855