

# PRODUCT INFORMATION



## JKC363 (acetate)

Item No. 41555

**Formal Name:** cyclic (1→7)-disulfide N-(3-mercapto-1-oxopropyl)-L-α-glutamyl-L-histidyl-3-(2-naphthalenyl)-D-alanyl-L-arginyl-L-tryptophylglycyl-L-cysteinyl-L-prolyl-L-prolyl-L-lysyl-L-α-asparagine, acetate

**Synonyms:** Ac-c[Deamino-Cys<sup>11</sup>-D-Nal<sup>14</sup>-Cys<sup>18</sup>-Asp<sup>22</sup>]-β-MSH-(11-22)-NH<sub>2</sub>; Cyclic [Mpr<sup>11</sup>,D-Nal<sup>14</sup>,Cys<sup>18</sup>,Asp<sup>22</sup>-NH<sub>2</sub>]-β-MSH (11-22)

**Peptide Sequence:** cyclo(X<sub>1</sub>EHx<sub>2</sub>RWGC)PPKD-NH<sub>2</sub> (X<sub>1</sub>=β-mercaptopropionate; x<sub>2</sub>=β-(2-naphthyl)-D-alanine)

**MF:** C<sub>69</sub>H<sub>91</sub>N<sub>19</sub>O<sub>16</sub>S<sub>2</sub> • XC<sub>2</sub>H<sub>4</sub>O<sub>2</sub>

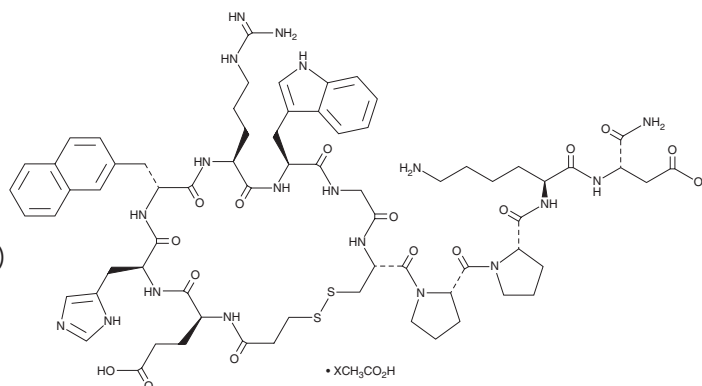
**FW:** 1,506.7

**Purity:** ≥98%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

JKC363 (acetate) is supplied as a solid. Aqueous solutions of JKC363 (acetate) can be prepared by directly dissolving the solid in aqueous buffers. JKC363 (acetate) is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

## Description

JKC363 is a cyclic peptide antagonist of melanocortin receptor 4 (MC4R) (IC<sub>50</sub> = 0.5 nM).<sup>1</sup> It is selective for MC4R over MC3R (IC<sub>50</sub> = 44.9 nM). JKC363 (100 nM) decreases basal thyrotropin-releasing hormone (TRH) secretion and α-melanocyte-stimulating hormone- (α-MSH-) or γ<sub>2</sub>-MSH-induced TRH secretion in rat hypothalamic explants. It inhibits proliferation of isolated postnatal rat hippocampal neural precursor cells induced by [Nle<sup>4</sup>,D-Phe<sup>7</sup>]-α-MSH (Item No. 41548) when used at a concentration of 10 nM.<sup>2</sup> Intrathecal administration of JKC363 (5 nmol/animal) decreases paw licking and flinching in the formalin test in mice.<sup>3</sup>

## References

- Kim, M.S., Small, C.J., Russell, S.H., *et al.* Effects of melanocortin receptor ligands on thyrotropin-releasing hormone release: Evidence for the differential roles of melanocortin 3 and 4 receptors. *J. Neuroendocrinol.* **14**(4), 276-282 (2002).
- Carniglia, L., Turati, J., Saba, J., *et al.* Melanocortin-receptor 4 activation modulates proliferation and differentiation of rat postnatal hippocampal neural precursor cells. *Neuropharmacology* **257**, 110058 (2024).
- Bellasio, S., Nicolussi, E., Bertorelli, R., *et al.* Melanocortin receptor agonists and antagonists modulate nociceptive sensitivity in the mouse formalin test. *Eur. J. Pharmacol.* **482**(1-3), 127-132 (2003).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

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