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# DATASHEET

Endomorphin-1

## Product overview

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| **Name** | Endomorphin-1 |
| **Cat No** | HB2410 |
| **Biological action** | Agonist |
| **Description** | Potent, selective μ-opioid receptor agonist |

## Biological Data

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| **Biological description** | Potent, selective μ-opioid receptor agonist ($K_i$ values are 360 pM and >1000 nM at μ, δ and κ receptors respectively). Endogenous peptide. Shows >4000 and 15,000-fold selectivity for μ over δ and κ receptors. Shows antinociceptive activity. |

## Solubility & Handling

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| **Storage instructions** | -20°C (desiccate) |
| **Solubility overview** | Soluble in water |
| **Important** | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

## Chemical Data

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| **Chemical name** | Tyr-Pro-Trp-Phe-$NH_2$ |
| **Molecular Weight** | 610.67 |
| **Chemical structure** | |
| **Molecular Formula** | $C_{34}H_{38}N_6O_5$ |
| **CAS Number** | 189388-22-5 |
| **PubChem identifier** | 5311080 |
| **SMILES** | C1CC(N(C1)C(=O)C(CC2=CC=C(C=C2)O)N)C(=O)NC(CC3=CNC4=CC=CC=C43)C(=O)NC(CC5=CC=CC=C5)C(=O)N |
| **InChiKey** | ZEXLJFNSKAHNFH-SYKYGTKKSA-N |

## References

**A potent and selective endogenous agonist for the mu-opiate receptor.**

Zadina et al (1997) Nature 386
**PubMedID** 9087409

**Opposite effects of neuropeptide FF on central antinociception induced by endomorphin-1 and endomorphin-2 in mice.**

Wang et al (2014) PLoS 9
**PubMedID** 25090615

**Endomorphin-1 and endomorphin-2: pharmacology of the selective endogenous mu-opioid receptor agonists.**

Horvath (2000) Pharmacol Ther 88

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| **PubMedID** | 11337033 |