

## Product Data Sheet

Product Name: GnRH Associated Peptide (GAP) (1-13), human  
 Cat. No.: GP10043

### Chemical Properties

Cas. No. 100111-07-7

Chemical Name GnRH Associated Peptide (GAP) (1-13), human

SMILES CCC(C)C(C(=O)NC(C(C)C)C(=O)O)NC(=O)C(CCC(=O)O)NC(=O)C(CCC(=O)N)NC(=O)C(CC1=CC=CC=C1)NC(=O)C(CO)NC(=O)C(CC(=O)N)C(=O)O

Formula C<sub>65</sub>H<sub>101</sub>N<sub>15</sub>O<sub>25</sub>

M.Wt

Solubility ≥ 74.6mg/mL in DMSO

Storage

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

Sequence: Asp-Ala-Glu-Asn-Leu-Ile-Asp-Ser-Phe-Gln-Glu-Ile-Val

The cloned complementary DNA sequence encoding the human gonadotropin-releasing hormone (GnRH) precursor protein was used to construct an expression vector for the bacterial synthesis of the 56-amino acid GnRH-associated peptide (GAP). GAP was found to be a potent inhibitor of prolactin secretion and to stimulate the release of gonadotropins. Active immunization with peptides corresponding to GAP sequences led to greatly increased prolactin secretion.

Gonadotropin-releasing hormone (GnRH) is known and named for its essential role in vertebrate reproduction. Release of this decapeptide from neurons in the hypothalamus controls pituitary gonadotropin levels that, in turn, regulate the gonadal state. The importance of GnRH is underscored by its widespread expression and conservation across vertebrate taxa. Also, GnRH-associated peptide (GAP) is co-secreted with GnRH into the hypophyseal portal bloodstream.

### References:

1. K8roly Nikolics,, Anthony J. Mason, ?va Sznyi, J. Ramachandran & Peter H. Seeburg, A prolactin-inhibiting factor within the precursor for human gonadotropin-releasing hormone, Nature 316, 511-517 (8 August 1985) doi:10.1038/316511a0
2. White SA, Kasten TL, Bond CT, Adelman JP, Fernald RD. Three gonadotropin-releasing hormone genes in one organism suggest novel roles for an ancient peptide. Proc Natl Acad SciUSA 92: 8363-8367, 1995.
3. Tianbao Song, Karoly Nikolics, Peter H. Seeburg, Paul C. Goldsmith, GnRH-prohormone-containing neurons in the primate brain: Immunostaining for the GnRH-Associated peptide, Peptides, Volume 8, Issue 2, March-April 1987, Pages 335-346
4. Ronchi E. ? Aoki C. ? Krey L.C. ? Pfaff D.W. Immunocytochemical Study of GnRH and GnRH-Associated Peptide in Male Syrian Hamsters as a Function of Photoperiod and Gonadal Alterations, Neuroendocrinology 1992;55:134-145 (DOI:10.1159/000126108)
5. I.J. Clarke, J.T. Cummins, F.J. Karsch, P.H. Seeburg, K. Nikolics, GnRH-associated peptide (GAP) is cosecreted with GnRH into the hypophyseal portal blood of ovariectomized sheep, Biochemical and Biophysical Research Communications, Volume 143, Issue 2, 13 March 1987, Pages 665-671

**Caution: Product has not been fully validated for medical applications. For research use only.**

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