

Ghrelin/MTLRP

Identity

Other names **Motilin-related peptide (MTLRP)**

GHRL

Hugo [LOC51738](#)

Location 3p26-p25

DNA/RNA

Transcription 600 bp, two mRNAs are encoded by the same genes, they are identical except for the lack of one codon (CAG) located at an exon intron boundary.

Protein

Description two precursor s of 117 and 116 amino acids encoding preproGhrelin/MTLRP and prepro-des-Gln14-Ghrelin/ delta Gln14 MTLRP, respectively. The 28 amino-acids Ghrelin/MTLRP and the 27 amino-acids des-Gln14-Ghrelin/delta Gln14 MTLRP are modified post-translationally by the addition of a n-octanoic acid on Serine 3.

The 28 amino acids Ghrelin/MTLRP is produced from a protein precursor of 117 residues that contains a signal peptide from residues 1to 23, the ghrelin/MTLRP moiety from residues 24 to 51, the MTLRP-associated peptide moiety from residues 52 to 117.

The 27 amino acids des-Gln14-Ghrelin/delta Gln 14 MTLRP is produced from a protein precursor of 116 residues identical to the 117 aa precursor excep that the des-Gln14-Ghrelin/delta Gln14 MTLRP moiety corresponds to residues 24 to 50 and accordingly the MTLRP-associated peptide moiety from resisues 51 to 116.

Expression Ghrelin/MTLRP is mainly expressed by the enteroendocrine cells of the stomach; its expression decreased gradually along the gastro-intestinal tract and a faint expression was also detected in testis. By Immunochemistry Ghrelin-immuno reactive neurons were found in the hypothalamic arcuate nucleus.

Localisation As a peptide hormone Ghrelin/MTLRP is secreted in the blood.

Function As the endogenous ligand of the growth hormone secretagogues (GHS) receptor, Ghrelin/MTLRP is involved in the pulsatile secretion of Growth hormone. In addition to this role Ghrelin/MTLRP is in the regulation of feeding. In rodent In contrast to leptin, Ghrelin/MTLRP promotes food intake and obesity. In addition Ghrelin/MTLRP stimulates motricity of the gastrointestinal tract and acid secretion.

Homology ppGhrelin/MTLRP share 47% of similarity with the precursor of Motilin. In addition Ghrelin receptor (GHS-R) and Motilin receptor (GPR38) share 52% identity.

External links

Nomenclature

[Hugo](#)

[LOC51738](#)

[GDB](#)

[GHRL](#)

[Entrez Gene](#) [GHRL 51738](#) ghrelin precursor

Cards

[Atlas](#) [GhrelinID327](#)

[GeneCards](#) [GHRL](#)

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[CancerGene](#) [GHRL](#)

[Genatlas](#) [GHRL](#)

[GeneLynx](#) [GHRL](#)

[eGenome](#) [GHRL](#)

[euGene](#) [51738](#)

Genomic and cartography

[GoldenPath](#) [GHRL](#) - [chr3:10302434-10307409](#) - [3p25.3](#) (hg17-May_2004)

[Ensembl](#) [GHRL - 3p25.3 \[CytoView\]](#)

[NCBI](#) [Genes Cyto](#) [Gene Seq](#) [Map View - NCBI]

[OMIM](#) [Disease map \[OMIM\]](#)

[HomoloGene](#) [GHRL](#)

Gene and transcription

[Genbank](#) [AF296558](#) [SRS] [AF296558](#) [ENTREZ]

[Genbank](#) [AY701846](#) [SRS] [AY701846](#) [ENTREZ]

[Genbank](#) [AB029434](#) [SRS] [AB029434](#) [ENTREZ]

[Genbank](#) [AB035700](#) [SRS] [AB035700](#) [ENTREZ]

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[RefSeq](#) [NM_016362](#) [SRS] [NM_016362](#) [ENTREZ]

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[AceView](#) [GHRL](#) AceView - NCBI

[TRASER](#) [GHRL](#) Traser - Stanford

[Unigene](#) [Hs.302131](#) [SRS] [Hs.302131](#) [NCBI] [HS302131](#) [spliceNest]

Protein : pattern, domain, 3D structure

[SwissProt](#) [Q9UBU3](#) [SRS] [Q9UBU3](#) [EXPASY] [Q9UBU3](#) [INTERPRO]

[CluSTr](#) [Q9UBU3](#)

[Blocks](#) [Q9UBU3](#)

Polymorphism : SNP, mutations, diseases

[OMIM](#) [605353](#) [map]

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General knowledge

[Family Browser](#) [GHRL](#) [UCSC Family Browser]

[SOURCE](#) [NM_016362](#)

[SMD](#) [Hs.302131](#)

[SAGE](#) [Hs.302131](#)

[Amigo](#) [process|G-protein coupled receptor protein signaling pathway](#)

[Amigo](#) [process|cell-cell signaling](#)

[Amigo](#) [component|extracellular region](#)

[Amigo](#) [component|extracellular space](#)

[Amigo](#) [function|growth hormone receptor binding](#)

[Amigo](#) [function|growth hormone-releasing hormone activity](#)

[Amigo](#) [process|regulation of physiological process](#)

[Amigo](#) [component|soluble fraction](#)

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[Ghrelin: Regulation of Food Intake and Energy Homeostasis](#)
[GHRL](#)

Other databases

Probes

[Probe](#)

[Cancer Cytogenetics \(Bari\)](#)

[Probe](#)

[LOC51738 Related clones \(RZPD - Berlin\)](#)

PubMed

[PubMed](#)

[84 Pubmed reference\(s\) in LocusLink](#)

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