



## Gamma-glutamyl transpeptidases : structure and function /

Castellano, Immacolata

Springer,  
2013

Electronic books

Monografía

Gamma-Glutamyl Transpeptidases ( $\gamma$ -GTs) are members of the N-terminal nucleophile hydrolase superfamily, enzymes that cleave the  $\gamma$ -glutamyl amide bond of glutathione to liberate cysteinylglycine. The released  $\gamma$ -glutamyl group can be transferred to water (hydrolysis) or to amino acids or short peptides (transpeptidation).  $\gamma$ -GT plays a key role in the gamma glutamyl cycle by regulating the cellular levels of the antioxidant glutathione, hence it is a critical enzyme in maintaining cellular redox homeostasis.  $\gamma$ -GT is upregulated during inflammation and in several human tumors, and it is involved in

<https://rebiunoda.pro.baratznet.cloud:38443/OpacDiscovery/public/catalog/detail/b2FpOmNlbgVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMjU0NDYxMzY>

**Título:** Gamma-glutamyl transpeptidases structure and function Immacolata Castellano, Antonello Merlino

**Editorial:** [Place of publication not identified] Springer 2013

**Descripción física:** 1 online resource (52 pages) illustrations (some color)

**Tipo Audiovisual:** Life sciences Human physiology Biochemical engineering Enzymes Enzymology levenswetenschappen fysiologie physiology engineering biochemie biochemistry enzymologie Biology (General) Biologie (algemeen)

**Mención de serie:** SpringerBriefs in biochemistry and molecular biology 2211-9353

**Bibliografía:** Includes bibliographical references

**Contenido:** Preface; Contents; 1 Gamma-Glutamyl Transpeptidases: Structure and Function; Abstract; 1 ... Introduction; 2 ... Occurrence, Genes, and Gene Expression; 2.1 Hepatic Expression of gamma -GT; 2.2 gamma -GT Gene Structure; 2.3 Induction of Hepatic gamma -GT; 2.4 gamma -GT-Related Gene Products; 3 ... Structure and Function of gamma -GTs; 4 ... Autoprocessing and Reaction Mechanism of gamma -GTs; 4.1 Autoprocessing; 4.2 Reaction Mechanism; 4.3 gamma -Glutamyl Binding Site; 4.4 Acceptor Binding Site; 4.5 Transpeptidation Versus Hydrolysis; 4.6 Enzymatic Assays; 4.7 Biochemical Properties of gamma -GTs 4.8 Quest for Inhibitors 4.9 Inhibitor Mechanisms; 4.10 Conformational Stability of gamma -GTs; 4.11 Search for Thermostable gamma -GTs; 5 ... gamma -GT in Bioclinical; 5.1 Pathways of gamma -GT Induction; 5.2 gamma -GT and Cancer; 5.3 gamma -GT and Cisplatin Resistance; 5.4 gamma -GT and Tumor Progression; 5.5 gamma -GT as a Target for Anticancer

Treatments; 5.6 gamma -GT Complexes: Novel Biomarkers for Cancer and Other Pathologies; 6 ... gamma -GTs: Biotechnological and Biomedical Applications; 6.1 gamma -GTs in the Production of SCV-07 and of Glutamyl Phenyl Hydrazine Analogs 6.2 gamma -GTs as Cephalosporin Acylases 6.3 gamma -GTs as Glutaminases; 6.4 gamma -GTs in the Production of Theanine; 6.5 gamma -GT to Release Drugs; 7 ... Conclusions; References

**Copyright/Depósito Legal:** 858656860 858763698 878018510 973348817 985063331 987922871 1005797988 1026464804 1066638182 1087353050 1097279433 1110801309 1112566018 1119510864

**ISBN:** 9783034806824 electronic bk.) 3034806825 electronic bk.) 3034806817 9783034806817 1299856853 ebk) 9781299856851 ebk) 9783034806817

**Materia:** Peptidase Transpeptidation Life Sciences Enzymology Human Physiology Biochemical Engineering SCIENCE- Life Sciences- Biochemistry. Peptidase. Transpeptidation.

**Autores:** Merlino, Antonello

**Enlace a formato físico adicional:** Print version Castellano, Immacolata. Gamma-glutamyl transpeptidases. [S.l.] : Springer Basel, 2013 3034806817 (OCoLC)843532438

**Punto acceso adicional serie-Título:** SpringerBriefs in biochemistry and molecular biology

---

## Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- [informa@baratz.es](mailto:informa@baratz.es)