

Probing the interactions of sulfur-containing histidine compounds with human gamma-glutamyl transpeptidase

Alfonsina Milito¹, Mariarita Brancaccio¹, Michael Lisurek², Mariorosario Masullo³, Anna Palumbo¹, Immacolata Castellano^{1,*}

¹ Dept. of Biology and Evolution of Marine Organisms, Stazione Zoologica Anton Dohrn, Naples (Italy)

² Dept. of Computational Chemistry and Drug Design, Leibniz-Forschungsinstitut für Molekulare Pharmakologie, Berlin (Germany)

³ Dept. of Human Movement Sciences and Wellbeing, University of Naples "Parthenope", Naples (Italy)

Table S1. Cytotoxicity assay on HEK 293 cells. Cell vitality raw data were reported as units of fluorescence following the treatment with 5-thio for 24 and 48h (n=3).

| Condition | Average \pm SD |
|--------------------|------------------|
| NT 24h | 4717 \pm 153 |
| 5-thio 5 μ M | 6452 \pm 108 |
| 5-thio 20 μ M | 5470 \pm 71 |
| 5-thio 50 μ M | 4490 \pm 22 |
| 5-thio 100 μ M | 4395 \pm 5 |
| NT 48h | 7794 \pm 105 |
| 5-thio 5 μ M | 9353 \pm 76 |
| 5-thio 20 μ M | 8969 \pm 20 |
| 5-thio 50 μ M | 8869 \pm 52 |
| 5-thio 100 μ M | 8557 \pm 205 |

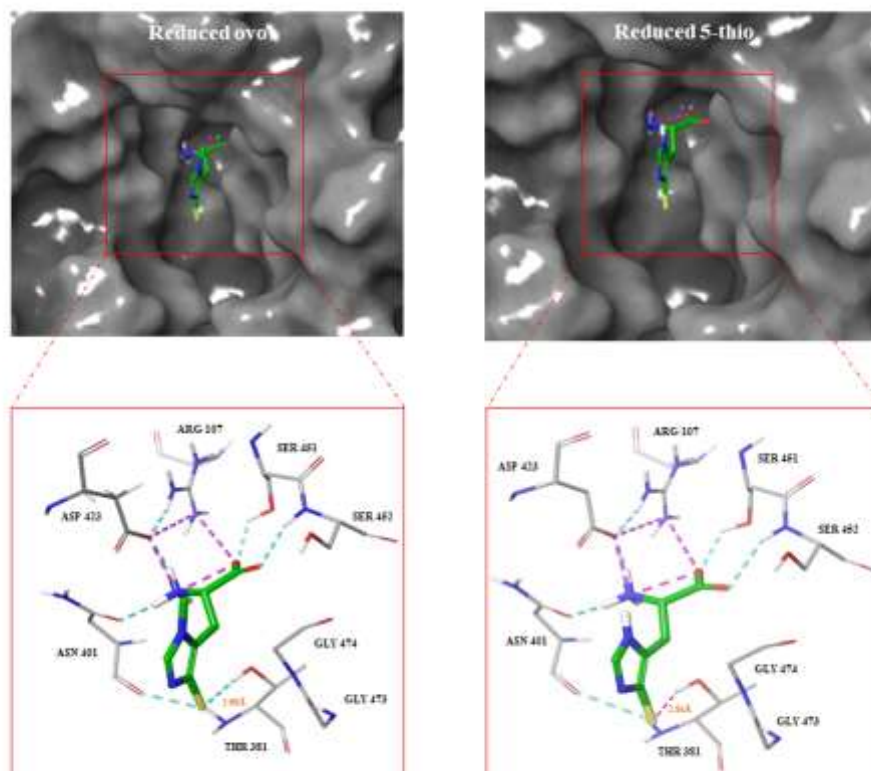


Figure S1. Molecular interactions of the reduced ovo and 5-thio within hGGT active site. On top: hGGT surface view from docking simulations; on bottom: interactions among ovo/5-thio and key residues in the active site of hGGT. Carbon atoms of the active site residues are *colored light grey*, compared to carbon atoms of the ligands which are *colored green*. Oxygen atoms are *colored red*, nitrogen *blue*, sulfur *yellow*, polar hydrogens *white*. Non polar hydrogens were hidden. Dashed blue and magenta lines represent hydrogen bonds and salt bridges, respectively. Molecular distance between ovo/5-thio and OH- of Thr381 are written in orange.