

**Thimet oligopeptidase (EC 3.4.24.15) key functions suggested by knockout mice phenotype characterization**

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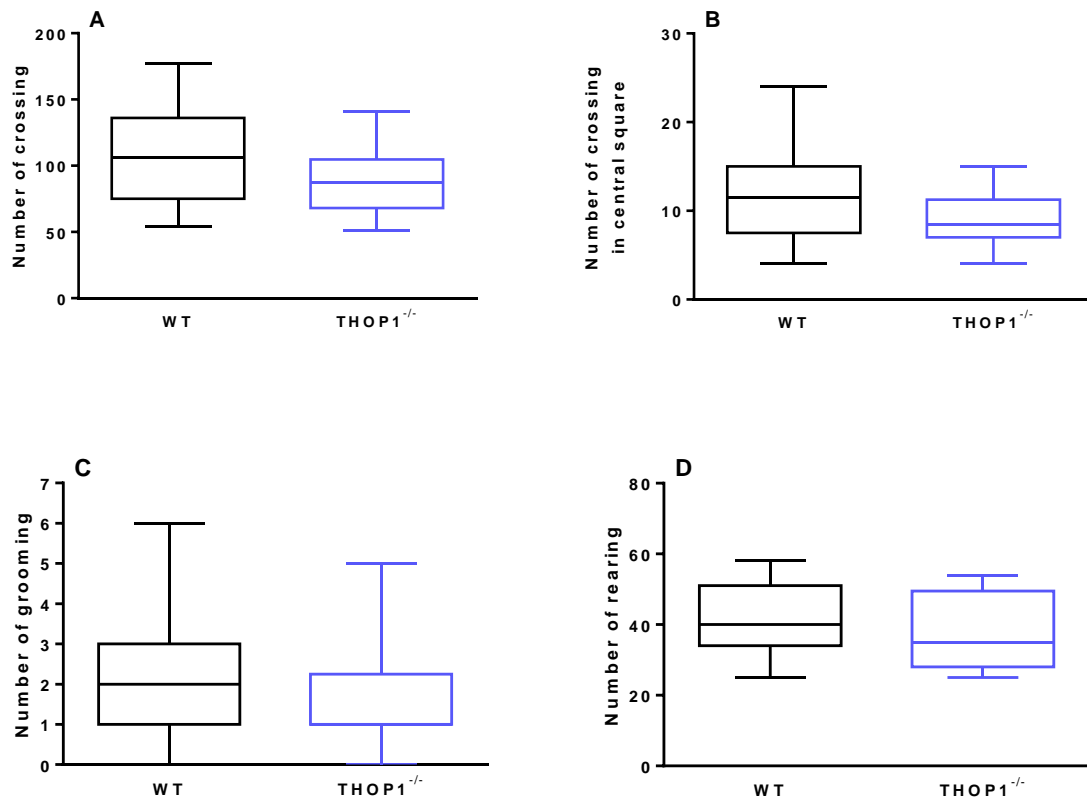
**Running Title:** THOP1 knockout mice

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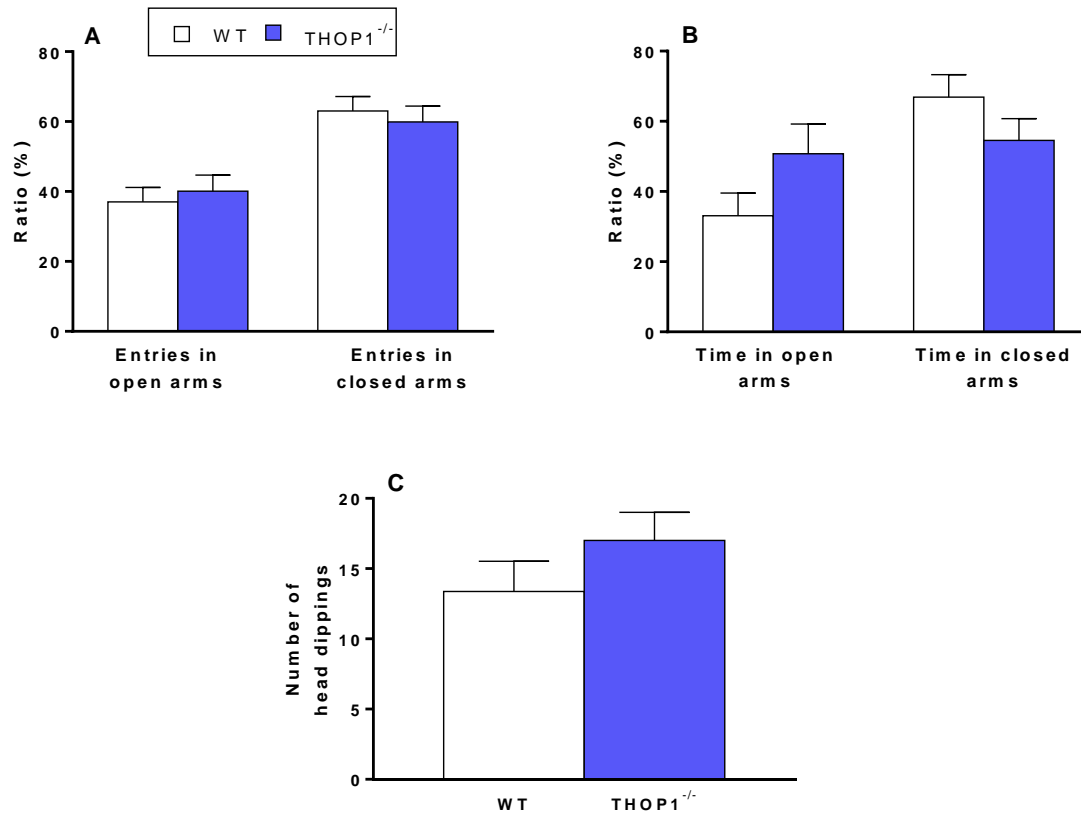
**Keywords:** THOP1; neurodegeneration; inflammation; sepsis; MHC-I; peptidome.

## Supplementary Figure S1



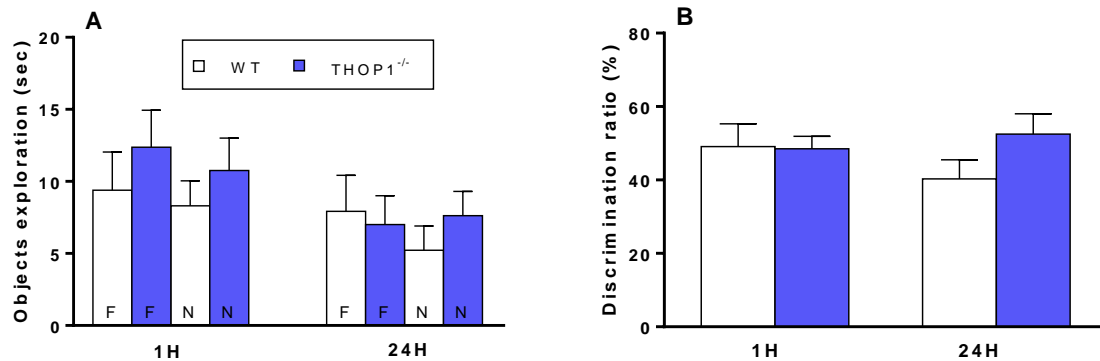
**Supplementary Figure S1. Open field task.** Representative images show typical examples of WT and THOP1<sup>-/-</sup> mice exploring behavior in the open field test. Each group of mice was placed in the open field apparatus and their number of crossing (A), number of crossing in the central square (B), number of grooming (C) and number of rearing (D) were measured. No difference was observed between the experimental groups. Data are presented as mean  $\pm$  S.E.M. (Student's t test). WT n=23, THOP1<sup>-/-</sup> n=18.

## Supplementary Figure S2



**Supplementary Figure S2. Elevated plus maze task.** (A) Percentage ratio of entries in open or closed arms/ (entries in both arms). (B) Percentage ratio of time spent in open or closed arms/ (time spent in both arms). (C) Number of head dippings during the test. No difference was observed between the experimental groups. Data are presented as mean  $\pm$  S.E.M. (Student's *t* test). WT n=08, THOP1<sup>-/-</sup> n=09.

## Supplementary Figure S3



**Supplementary Figure S3. Novel object recognition task. (A)** The graph shows the time of exploration in familiar (F) and novel (N) objects after 1 and 24h after the training. No difference was observed among groups. **(B)** The ratio of time spent exploring the novel object by the total time spent exploring both objects was described as discrimination rate. No significance between groups. Data are presented as mean  $\pm$  S.E.M. (One-way ANOVA test, Sidak's post hoc). WT n=13, THOP1<sup>-/-</sup> n=08.