

**Table S4**

. Kruskal-Wallis test of differences in parasite localization in *A. stephensi* (As), *A. gambiae* (Ag) and *A. gambiae* silenced for *TEP1* (*Ag<sup>TEP1KD</sup>*) between the indicated time points after infection (hpi).

| Ookinete position          | Kruskal Wallis test |                            |             |                |
|----------------------------|---------------------|----------------------------|-------------|----------------|
|                            | 18-20 hpi           | 21-23 hpi                  | 24-25 hpi   | <i>P</i> value |
| <b>As</b>                  |                     |                            |             |                |
| blood meal                 | ns                  | ns                         | ns          | 0.5852         |
| cell layer                 | ns                  | ns                         | ns          | 0.1077         |
| basal lamina               | > 21-23 hpi         | < 18-20 hpi<br>< 24-25 hpi | >21-23 hpi  | 0.0005         |
| <b>Ag</b>                  |                     |                            |             |                |
| blood meal                 | ns                  | >24-25 hpi                 | < 21-23 hpi | 0.0369         |
| cell layer                 | ns                  | < 24-25 hpi                | > 21-23 hpi | 0.0634         |
| basal lamina               | ns                  | < 24-25 hpi                | > 21-23 hpi | 0.0415         |
| <b>Ag<sup>TEP1KD</sup></b> |                     |                            |             |                |
| blood meal                 | > 24-25 hpi         | ns                         | < 18-20 hpi | 0.044          |
| cell layer                 | < 24-25 hpi         | ns                         | > 18-20 hpi | 0.0499         |
| basal lamina               | ns                  | ns                         | ns          | 0.6019         |

