

**Supplementary Table S7.** Protein expression of the actin-like encoding gene fragments in proteomes reported of different *T. vaginalis* isolates and under distinct culture conditions.

| Isolate           |         |        | CNCD147 <sup>23, 27</sup> |                  | T1 <sup>19, 21</sup> |     | FMV1 <sup>15</sup> |     | 1 <sup>28</sup> | FF28jT-Rio <sup>16</sup> | SD7 <sup>18</sup> | B7268 <sup>18</sup> | G3 <sup>18</sup> | SD10 <sup>18</sup> | LSU 160 <sup>29</sup> | Unknown <sup>20</sup> | B7RC2 <sup>24,26</sup> |       | RU393 <sup>25</sup> | TV17-48 <sup>30</sup> | FMV1 <sup>17</sup> | FF28jT-Rio <sup>17</sup> | FMV1 <sup>22</sup> |     |   |   |  |
|-------------------|---------|--------|---------------------------|------------------|----------------------|-----|--------------------|-----|-----------------|--------------------------|-------------------|---------------------|------------------|--------------------|-----------------------|-----------------------|------------------------|-------|---------------------|-----------------------|--------------------|--------------------------|--------------------|-----|---|---|--|
| Condition/Morph   |         |        | Put                       | Zn <sup>2+</sup> | IR                   | HI  | TF                 | CLS | TF              | IR                       | HI                |                     |                  |                    | Am                    | Ca <sup>2+</sup>      | Suc                    | HI/Am | Unknown             | HVir                  | LVir               | Infection (min)          |                    |     |   |   |  |
| Extract/Organelle |         |        | TE                        | TE               | Hyd                  | Hyd | TE                 | TE  | TE              | TE                       | MEP               |                     |                  |                    | TE                    | MVs                   | Exo                    | MEP   | Lys                 | TE                    | TE                 | 5                        | 30                 | 120 |   |   |  |
| Group             | Name    | TVAG_  |                           |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
| I                 | TvACT1  | 160060 |                           |                  |                      |     | XX                 | X   |                 | X                        |                   |                     |                  |                    |                       | ±                     | X                      |       |                     |                       |                    |                          |                    | X   | X | X |  |
|                   | TvACT2  | 172680 |                           |                  |                      |     | XX                 | X   |                 | X                        |                   |                     |                  |                    |                       | ±                     | X                      |       |                     |                       |                    |                          |                    | X   | X | X |  |
|                   | TvACT3  | 200190 | x                         |                  | XX                   |     | XX                 | X   |                 | X                        |                   |                     |                  |                    |                       |                       | X                      |       |                     |                       |                    |                          |                    |     | X | X |  |
|                   | TvACT4  | 249200 |                           |                  | ±                    |     | XX                 | X   |                 | X                        |                   |                     |                  |                    |                       |                       | X                      |       |                     |                       |                    |                          |                    | X   |   | X |  |
|                   | TvACT5  | 310030 |                           |                  |                      |     | XX                 | X   |                 | X                        |                   |                     |                  |                    |                       |                       | X                      |       |                     |                       | XX                 | X                        |                    | X   | X | X |  |
|                   | TvACT6  | 485210 |                           |                  |                      |     | XX                 | X   |                 | X                        |                   |                     |                  |                    |                       |                       | X                      |       |                     |                       |                    |                          |                    | X   | X | X |  |
|                   | TvACT7  | 149090 |                           |                  |                      | x   | XX                 | X   |                 | X                        |                   |                     |                  |                    |                       |                       | X                      |       |                     |                       |                    |                          |                    | X   |   | X |  |
|                   | TvACT8  | 54030  | x                         | x                |                      |     | XX                 | X   |                 |                          | x                 | x                   | x                | x                  | x                     | ±                     | X                      |       | x                   |                       |                    |                          |                    | X   | X | X |  |
|                   | TvACT9  | 90470  |                           |                  |                      |     | XX                 | X   |                 |                          |                   |                     |                  |                    | x                     |                       | X                      | x     | x                   |                       |                    |                          |                    | X   | X | X |  |
|                   | TvACT10 | 337240 |                           | x                |                      |     | XX                 | X   |                 |                          |                   |                     |                  |                    | x                     |                       | X                      | x     | x                   | x                     |                    |                          |                    | X   |   |   |  |
| II                | A       |        | 512800                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    | x                     |                       | x                      |       | x                   |                       |                    |                          |                    | x   | x | x |  |
|                   |         |        | 150270                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  | x                  |                       |                       |                        | x     |                     |                       |                    |                          |                    |     | x | x |  |
|                   |         |        | 534990                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    | x                     |                       | x                      |       | x                   |                       |                    |                          |                    | x   | x | x |  |
|                   | B       |        | 371880                    |                  |                      | XX  |                    | x   | XX              | x                        |                   |                     |                  |                    |                       | x                     |                        | x     | x                   | x                     | x                  | XX                       | x                  |     |   |   |  |
|                   |         |        | 043970                    |                  |                      |     |                    | XX  | x               |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 094140                    |                  |                      |     |                    | x   | XX              |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       | x                  |                          |                    |     |   |   |  |
|                   |         |        | 189860                    |                  |                      |     |                    | XX  | x               |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 027630                    |                  |                      |     |                    | x   | XX              |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 161530                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     | x |   |  |
|                   |         |        | 434970                    |                  |                      | ±   |                    | XX  | x               | x                        |                   |                     |                  |                    |                       |                       |                        |       |                     | x                     | x                  | x                        |                    |     |   |   |  |
|                   | C       |        | 248040                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 071770                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 495500                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 247170                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 167330                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 276270                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 225210                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 354260                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |
|                   |         |        | 238100                    |                  |                      |     |                    |     |                 |                          |                   |                     |                  |                    |                       |                       |                        |       |                     |                       |                    |                          |                    |     |   |   |  |

Morph: Morphology; TE: Total Extract; Put: Putrescine; Zn<sup>2+</sup>: Zinc; IR: Iron-restriction; HI: High iron; Ca<sup>2+</sup>: Calcium; Suc: Sucrose; Hyd: Hydrogenosomes; TF: Trophozoite; CLS: Cyst-Like Structure; MEP: Membrane-Enriched Pellet; Am: Amoeboid; HVir: High virulence; LVir: Low virulence; MVs Microvesicles; Exo: Exosome; Lys: Lysosome; X: Presence; XX: Overexpressed; ±: Down expression. Superindex numbers of references: <sup>15</sup>Dias-Lopes et al., 2018; <sup>16</sup>de Jesus et al., 2007; <sup>17</sup>Cuervo et al., 2008; <sup>18</sup>de Miguel et al., 2010; <sup>19</sup>Schneider et al., 2011; <sup>20</sup>Huang et al., 2012; <sup>21</sup>Beltrán et al., 2013; <sup>22</sup>Gould et al., 2013; <sup>23</sup>Quintas-Granados et al., 2013; <sup>24</sup>Twu et al., 2013; <sup>25</sup>Riestra et al., 2015; <sup>26</sup>Nievas et al., 2017; <sup>27</sup>Alvarez-Sánchez et al., 2018; <sup>28</sup>Beri et al., 2020; <sup>29</sup>Molgora et al., 2021; <sup>30</sup>Zimmann et al., 2022.