**S2 Table.** ***In vitro*** **comparison of bat-specific DNA mini-barcode primer pairs (products <300BP) for use with fecal DNA**. PCR amplification adhered to the conditions outlined in the respective primer publications. All tests were assessed by amplification performance to Sanger sequencing as well as ability to identify species-level taxonomy using common DNA alignment-based identifiers. DNA was isolated from eight singular fecal pellets and one tissue sample for a test panel that included five bat species of two families. Species tested were *Eptesicus fuscus* (one fresh fecal pellet and four at room temperature for three months), *Myotis auriculus*, *Corynorhinus townsendii*, *Tadarida brasiliensis*, and *Euderma maculatum* (internal tissue). The total number of samples are in parentheses.

| Primer | Author | Amplification (of 9) | Sequencing (of 9) | BLAST ID (species-level) | BOLD ID | Performance (%) |
|---|---|---|---|---|---|---|
| VF1 | Ivanova et al. 2006 | 3 | 0 | NA | NA | NA |
| BC1R | Ivanova et al. 2012 | | | | | |
| BC2F | Ivanova et al. 2012 | 0 | NA | NA | NA | NA |
| BC2R | Ivanova et al. 2012 | | | | | |
| BC3F | Ivanova et al. 2012 | 0 | NA | NA | NA | NA |
| BC3R | Ivanova et al. 2012 | | | | | |
| BC4F | Ivanova et al. 2012 | 4 | 0 | NA | NA | NA |
| BC4R | Ivanova et al. 2012 | | | | | |
| BC5F | Ivanova et al. 2012 | 0 | NA | NA | NA | NA |
| BC5R | Ivanova et al. 2012 | | | | | |
| BC6F | Ivanova et al. 2012 | 8 | 8 | 7** | 0** | 78% |
| VR1 | Ward et al. 2005 | | | | | |
| SFF_145f | Walker et al. 2016 | 9 | 9 | 9 | 9 | 100% |
| SFF_351r | Walker et al. 2016 | | | | | |

** Mini-barcode marker had insufficient resolution to yield credible matches for alignment-based identification.