**Supplement table 3. List of validated fecal glucocorticoid metabolites (FGMs) analysis by enzymeimmunoassays in macaque species**

|  |  |  |  |
| --- | --- | --- | --- |
| **Macaque species** | **Scientific name** | **Validated FGMs assay** | **Reference** |
| Formosan macaque | *Macaca cyclopis* | 11𝛽-hydroxyetiocholanolone | This study1 |
| Long-tailed macaque | *Macaca fascicularis* | 11𝛽-hydroxyetiocholanolone  11-oxoetiocholanolone | Heistermann et al. (2006)1 |
| Japanese macaque | *Macaca fuscata* | Cortisol | Takeshita et al. (2018)2 |
| Rhesus macaque | *Macaca mulatta* | 11b-hydroxyetiocholanolone | Hoffman et al. (2011) |
| Barbary macaque | Macaca sylvanus | 11𝛽-hydroxyetiocholanolone  11-oxoetiocholanolone  Cortisol  Corticosterone | Heistermann et al. (2006) 1 |
| Crested macaque | *Macaca nigra* | 11𝛽-hydroxyaetiocholanolone | Marty et al. (2017) |

1 More than one immunoassay of FGM was evaluated.

2 Does not adopt the four criteria for evaluating the suitability of FGMs analysis.

**Heistermann, M., R. Palme, and A. Ganswindt. 2006.** Comparison of different enzymeimmunoassays for assessment of adrenocortical activity in primates based on fecal analysis. Am J Primatol 68: 257-273.

**Hoffman, C. L., J. P. Higham, M. Heistermann, C. L. Coe, B. J. Prendergast, and D. Maestripieri. 2011.** Immune function and HPA axis activity in free-ranging rhesus macaques. Physiol Behav 104: 507-514.

**Marty, P. R., K. Hodges, M. Heistermann, M. Agil, and A. Engelhardt. 2017.** Is social dispersal stressful? A study in male crested macaques (*Macaca nigra*). Horm Behav 87: 62-68.

**Takeshita, R. S. C., F. B. Bercovitch, K. Kinoshita, and M. A. Huffman. 2018.** Beneficial effect of hot spring bathing on stress levels in Japanese macaques. Primates 59: 215-225.