S1 Table. Comparative Early Pleistocene *Homo* samples<sup>a</sup>.

| Sample  | Specimen   | Data source      |
|---|--|------------------|
|   |  | and references   |
| H. habilis s. I. (2.3-1.6 Ma Homo from East Africa) |  |                  |
| Hadar   | A.L. 666-1   | [1]              |
|   | L7-279*, 628-224, 894-1*; Omo 29-43*, 74-18*,  |                  |
| Omo (Member G/H)                                    | 75-14*,75s-15*, 75s-16, 75i-1255, 195- <mark>1630*</mark> ,                            | casts, [2,3]     |
|   | SH1-1-17*  |                  |
|   | KNM-ER 1462, 1470, 1480, 1483, 1501, 1502*,  |                  |
| East Turkana  | 1507*, 1508*, 1590*, 1801*, 1802*, 1805*, 1811,  | casts/originals, |
| (upper Burgi and lower KBS)                         | 1812, <mark>1813*</mark> , <mark>2597*</mark> , 2599, <mark>2601*</mark> , 3734, 3891, | [3,4]            |
|   | 3953, 60000, 62000, 62003  |                  |
| Olduvai   | OH 4, 6*, 7*, 13*, 15, 16*, 21*, 24*, 27, 37*, 39*,                                    | casts/originals, |
| (Bed I/lower Bed II)                                | 41*, 42, 44*, 45*, 55*, 57, 58, 60, 62, 65, 69, 73                                     | [3,5,6]          |
| H. ergaster (1.7-0.8 Ma Homo from East Africa)      |  |                  |
| East Turkana  | KNM-ER 730, 803, <mark>806*</mark> , 807, <mark>808*</mark> , 819, <mark>820*</mark> , | casts/originals, |
| (upper KBS and Okote)                               | 992*, 1506*, 1515, <mark>1808*</mark> , <mark>1814*</mark> , <mark>3733</mark> *       | [3]              |
| West Turkana (1.47 Ma)                              | KNM-WT 15000   | [7]              |
| Omo (Member K)                                      | Omo K7-1*  | cast, [2]        |
| Konso   | KGA 10-1*, 11-350*   | casts, [8]       |
| Olduvai (Bed III/IV)                                | OH 22*, 51*  | casts/originals  |
| Dmanisi Homo (1.75 Ma)                              |  |                  |
| Dmanisi   | D2600, 2282/211, 2700/2735   | [9,10]           |
| early Javanese H. erectus (>1.2-0.8 Ma)             |  |                  |
| Sangiran Lower                                      | S1b*, 4*, 5*, 6a*, 6b*, 7* (N=27), 8, 9*, 15a, 22*,                                    | casts/originals, |
| (Grenzbank or below)                                | 27*; Bk7905*; Bpg 2001.04  | [11,12]          |
| Sangiran Upper                                      | S7* (N=18), 17*, 21, Skull IX*; Sb 8103*, Ng   | cast/original,   |
| (above Grenzbank)                                   | 8503*, Bu 9706; Njg 2005.05  | [13-16]          |
| Sangiran (stratigraphy                              | N ~ 0002*  | acat/ariginal    |
| unknown)  | Ng 9603*   | cast/original    |
| East Asian Middle Pleistocene archaic Homo          |  |                  |
| Zhoukoudian Locality 1                              | Sin 1–117, 130'–147'; Zdansky premolar &   | casts/originals, |
|   | molar; PA 67-70, 110   | [17,18]          |
|   | PA 102 (Lantian); PA 832-839, HXUP3  |                  |
| Lantian, Hexian, Changyang,                         | (Hexian); V. 1681, 1682 (Changyang);   | originals, [18-  |
| Chaoxian, Xujiayao, Penghu <sup>b</sup>             | Chaoxian; PA 1480, 1481, 1496, 1500  | 23]              |
|   | (Xujiayao); Penghu 1   |                  |

## \*Samples included in the EFAs.

<sup>&</sup>lt;sup>a</sup>The original fossil specimens listed above are housed at the National Museum of Ethiopia, Addis Ababa (Hadar, Omo, Konso), National Museum of Kenya, Nairobi (Turkana), National Museum and House of Culture, Dar es Salaam, and National Natural History Museum, Arusha (Olduvai), Georgian National Museum, Tbilisi (Dmanisi), Senckenberg Research Institute, Frankfurt-am-Main, Geological Museum, Bandung, Bandung Institute of Technology, Bandung, and Gadjah Mada University, Yogyakarta (Sangiran), Institute of Vertebrate Paleontology and Paleoanthropology, Beijing (Zhoukoudian, Lantian, Hexian, Changyang, Chaoxian, Xujiayao), and National Museum of Natural Science, Taichung (Penghu).

<sup>&</sup>lt;sup>b</sup>Specimen possibly belonging to the Late Pleistocene [23].

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