



Figure S5. For single timescale fit, median correlation timescale and hierarchy score correlation are sensitive to the maximum time lag used for fitting. (A) For a single timescale fit, the median estimated timescale (over all cortical units) increases monotonously with maximum lag T_{max} , independent of the minimum time lag T_{min} used for fitting (light and dark blue lines). In contrast, when using a two-timescale fit, the median estimated correlation timescale remains consistent for sufficiently large max lags $T_{max} > 1000$ ms, for both, $T_{min} = 5$ ms and $T_{min} = 30$ ms (light and dark green lines). However, timescales are larger for $T_{min} = 5$ ms, because often fits are flattened by negative autocorrelation for short time lags, which are mostly excluded with $T_{min} = 30$ ms. (B) The Pearson correlation coefficient r_P between an area's median correlation timescale and anatomical hierarchy score (c.f. Fig. 2D) is consistently high if T_{max} is chosen sufficiently high. (C) Similarly, for sufficiently large T_{max} , the p-value of the fit is consistently below 0.05. For all plots, red dot indicates the $T_{max} = 10$ s used for the main analyses. Timescales were estimated for the natural movie condition of the *Functional Connectivity* data set.