Supplementary Figure 1 Comparison of Temporal Windows for Defining Tuning.

BF was determined for each site (see methods) based on a 200ms window following stimulus onset, as well as based on a shorter window (10-60ms following stimulus onset). Sites in which tuning was defined for both windows showed highly similar estimates of BF, indicating that tuning was stable over time.

Supplementary Figure 2 Three Dimensional Representation for Tuning Curves Recorded in Monkey A.

Each panel shows a heatmap indicating the responses to each frequency (x axis) across depths (y axis) within penetrations from Monkey A. Lighter colors indicate a larger response, and the position of the panels indicates the location of recordings in the M/L and A/P dimensions (with a format matching figures 5,7, and 9). Blue shading indicates non-responsive or untested depths. In cases where a location was sampled more than once, the example with the clearest frequency tuning or tonotopy is shown, as described in the main text.

Supplementary Figure 3 Three Dimensional Representation for Tuning Curves Recorded in Monkey W.

Following the same conventions as supplementary figure 2.

Supplementary Figure 4 Three Dimensional Representation for Tuning Curves Recorded in Monkey E.

Following the same conventions as supplementary figure 2.

Supplementary Figure 5 Three Dimensional Representation for Tuning Curves Recorded in Monkey M.

Following the same conventions as supplementary figure 2.

Supplementary Figure 6 Three Dimensional Representation for Tuning Curves Recorded in Monkey C.

Following the same conventions as supplementary figure 2.

Supplementary Figure 7 Three Dimensional Representation for Tuning Curves Recorded in Monkey X.

Following the same conventions as supplementary figure 2.

Supplementary Figure 8 Three Dimensional Representation of Latency of Responses

The latency across each penetration is indicated, with shorter latency responses shown with lighter colors and longer latencies with darker colors. The panels for each monkey are organized in the same manner as in supplementary figures 2-7. Blue shading indicates non-responsive or untested depths.

Supplementary Figure 9 Spectra of Sounds Used in Recordings

Spectra of pure tones, recorded from Audax Model TWO25V2 speakers used to collect data from monkeys E,M,C and X. Recordings were collected with a microphone (Sennheiser ME62/K6P) placed at the location normally occupied by the monkey's head, and sampled with a PC sound card at 44.1kHz. The power scale (y axis) is in arbitrary units. Prior to these measurements, the sounds were calibrated using a sound level meter to be at 50 dB SPL. The noise floor of the recording booth was approximately 30 dB SPL.