Supplementary Figures  
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The role of hyperpolarization-activated cationic current ($I_h$) in spike-time precision and intrinsic resonance in cortical neurons in vitro

Supplementary Figure 1. Analysis of the coefficient of oscillation ($C_o$) and amplitude of oscillation ($A_o$).  

_A_  

$$C_o = \frac{\text{SD} (l_n)}{\text{mean} (l_n)}$$

Supplementary Figure 1. Analysis of the coefficient of oscillation ($C_o$) and amplitude of oscillation ($A_o$).  

_B_  

$$A_o = [(b+c)/2] - a$$

Supplementary Figure 1. Analysis of the coefficient of oscillation ($C_o$) and amplitude of oscillation ($A_o$). A, Coefficient of oscillation ($C_o$). The first 6 extrema were detected on the autocorrelation function and the intervals (from $I_1$ to $I_6$) were measured. $C_o$ was calculated as indicated by the equation (SD, standard deviation). In the present example, the oscillation was regular and $C_o$ was small (0.073). B, Amplitude of oscillation ($A_o$). The amplitude was calculated as indicated by the equation. In this example, the oscillation is only slightly attenuated and $A_o$ is large (1.015).
Supplementary Figure 2. Stability of excitatory synaptic transmission recorded in CA1 pyramidal neurons from acute slices. Top, EPSPs recorded in control (black) and in the presence of 1 μM ZD-7288 (red). Bottom, time-course of the normalized EPSP slope.
Supplementary Figure 3. Evoked θ oscillations in the neocortex. A, Field potential was recorded extracellularly in L5 of visual cortical slices and θ oscillations were evoked by electrical stimulation in L2/3 in the presence of 50 µM CCh and 10 µM Bic. Upper traces, evoked θ oscillations. The dashed square represents the analyzed signal (enlarged lower traces). Lower graph, normalized auto-correlation function of the selected signal. In controls (left column), the field potential displayed an oscillation with a high coherence ($C_0=0.073$) and a large amplitude ($A_0=1.015$). In the presence of 1 µM ZD-7288 (right column), the coherence and the amplitude of the oscillation decreased ($C_0=0.275$; $A_0=0.708$). B, Effects of ZD-7288 on the coefficient of oscillation (left) and the amplitude of oscillation (right) for spontaneous (black circles) and evoked θ oscillations (grey circles) recorded extracellularly.