

et al. Science **326**, 445 (2009); DOI: 10.1126/science.1174481 the basic taste modalities is mediated by distinct TRCs, with taste at the periphery proposed to be encoded via labeled lines [i.e., a sweet line, a sour line, a bitter line, etc. ( )]. Given that Car4 is specifically tethered to the surface of sour-sensing cells, and thus ideally poised to provide a highly localized acid signal to the sour TRCs, we reasoned that carbonation might be sensed through activation of the sour-labeled line. A prediction of this postulate is that prevention of sour cell activation should e

representations, with logical dependencies among them ( , ). For example, to pronounce a verb in a sentence, one must determine the appropriate tense given the intended meaning and syntactic context (e.g., walk, walks, walked, or walking

studies have tied it to a broad variety of linguistic and nonlinguistic processes ( ). This uncertainty may be a consequence of the coarseness of current measurements. It remains possible that grammat-

patient A, 37 in B, and 30 in C). Of these channels, 49 (57%) were within Broca's area or the anterior temporal lobes (16 in patient A, 19 in B, 14 in C). Of the 49 channels, 26 were within Broca's area, and the majority (20 of 26) yielded a strong triphasic (three-component) LFP waveform (9 in patient A, 8 in B, 3 in C). The mean peaks occurred  $\sim$ 200,  $\sim$ 320, and  $\sim$ 450 ms after the target word onset (Fig. 2A), and this timing was consistent across patients (Fig. 4, A and B, and figs. S1, S4, and S5).