



S1 Fig. High-resolution imaging of whisker barrels in S1 cortex. **A**, High-resolution two-photon image of R-CaMP1.07-expressing neurons in L4 of S1 barrel cortex in a L4-R-CaMP1.07 mouse. An individual barrel is clearly visible (outline highlighted by dashed line) using a Nikon 16x NA0.8 objective. **B**, The diffuse labelling within the barrel is further resolved as labeled neuropil structures using a Olympus 20x NA1.0 objective. Different barrel as in A.