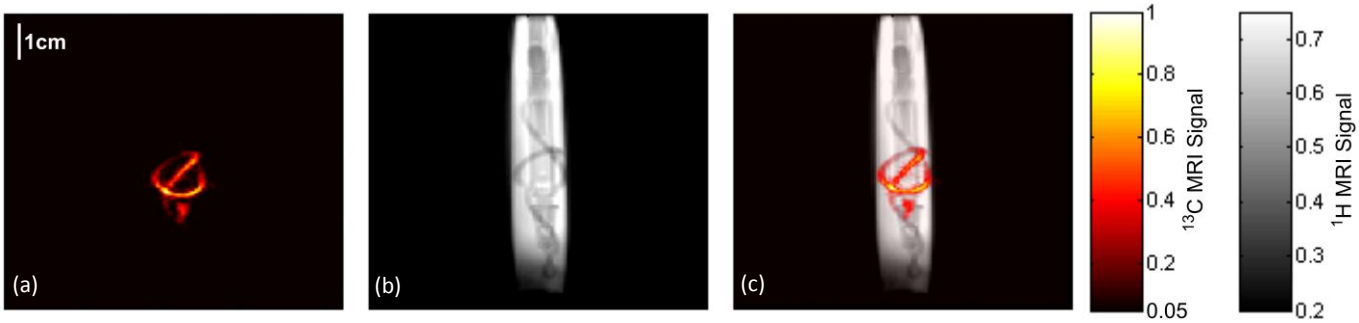
In vivo 13C-MRI using SAMBADENA

S5 Fig



S5 Fig: *In vitro* MRI with SAMBADENA-produced tracer solution. The phantom was mounted to the setup as described in S4 Fig and an HP experiment was performed (c_{HEA} = 5 mM, c_{cat} = 1 mM, t_{hyd} = 5 s, 80 °C, 15 bar pH_2). The tracer was extracted from the reactor and 150µl were injected into the phantom, similarly to the *in vivo* experiment described in the main text. Subsequently, ^{13}C-MRI was acquired ((a), co-registrated with an ^{1}H-MRI (b), which depicted the tracer solution in the tube of the phantom (see S4 Fig) (c). Note that in contrast to *in vivo* experiments, ^{13}C was recorded using a ^{13}C-surface coil (S2 Fig). Both, ^{1}H- and ^{13}C-MRI were normalized to the highest signal in the image. A 5 mM tracer solution was chosen because concentration and magnetization are similar to *in vivo* experiments (300µl, 80 mM tracer dilute with ~ 2.1ml blood of a 30g mouse and yield a final tracer concentration of ~10 mM *in vivo*; additionally, as HP of a concentrated sample is lower (see Supplementary Information 1), a 2x lower concentration was chosen). ^{13}C-MRI: 90/180°, RARE-factor: 38, FOV: $(8.4\text{cm})^2$, acquisition matrix of 128x96 px, interpolated to 256x256 px, in-plane resolution: 0.33 x 0.33 mm, one slice with thickness: 6 cm, T_R = 0.487 s, T_E = 79 ms, acquisition time: 0.487 s**.**