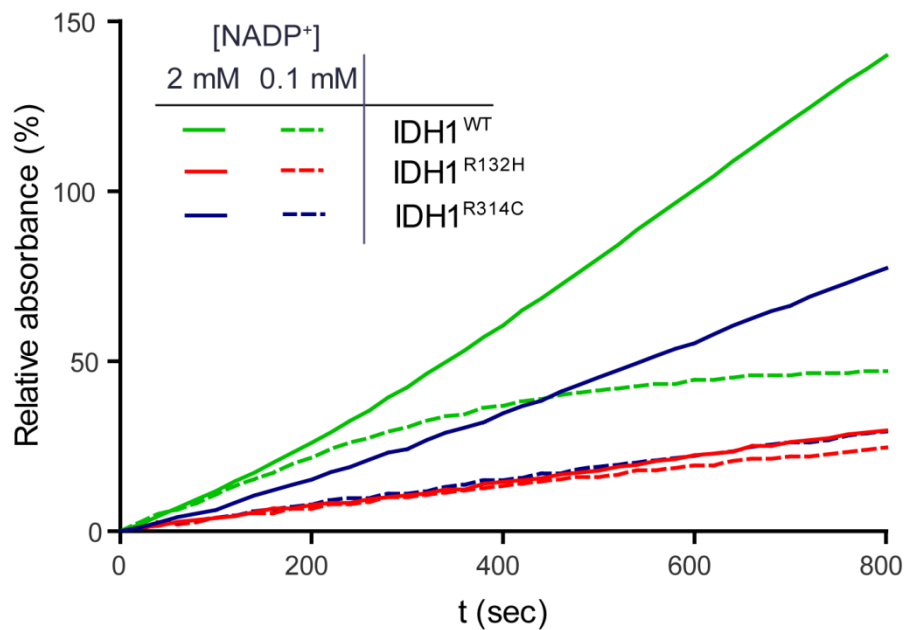
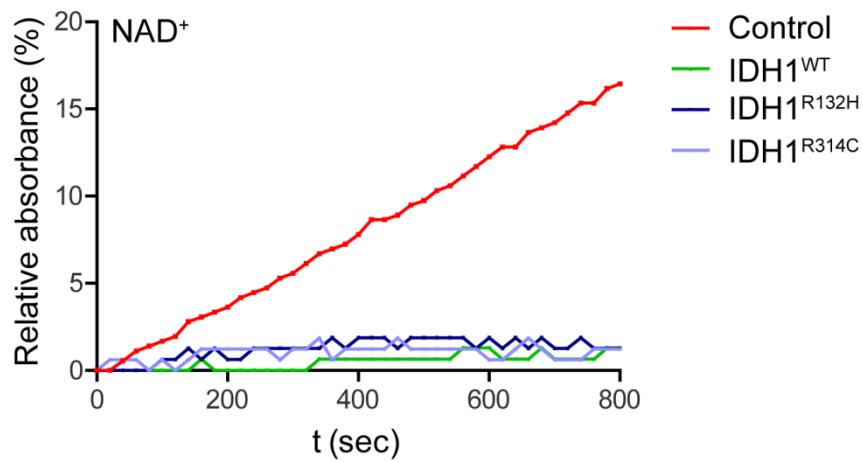


Supplementary data to 'Identification of a novel inactivating mutation in Isocitrate Dehydrogenase 1 (IDH1-R314C) in a high grade astrocytoma.'

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Supplementary Figure 1. IDH1^{R314C} activity can be rescued by supraphysiological NADP⁺ levels. Extracts of U251-IDH1^{R314C} U251-IDH1^{R132H} or U251-IDH1^{WT} were incubated with isocitrate and 100 μ M or 2 mM NADP⁺, and NADPH formation was measured in real time by 340 nm absorbance. The activity of IDH1^{R314C}-BAPHIS but not IDH1^{R132H}-BAPHIS was partly rescued by increasing NADP⁺ concentrations to 2 mM.



Supplementary Figure 2. The R314C mutation does not shift the cofactor dependency from NADP⁺ to NAD⁺. IDH1^{MUT}-GST enzymes were incubated with isocitrate and NAD⁺, and NADH formation was measured by 340 nm absorbance. All IDH1 enzymes were inactive in the presence of NAD⁺. As a positive control a liver extract was used.

Diagnosis	Number of samples	Number of samples verified IDH1 ^{R132H}	Number of samples verified IDH1 ^{WT}
GBM	47	1	42
Astrocytoma grade II	13	5	8
Astrocytoma grade III	2	0	1
Oligodendroglioma grade II	18	13	3
Oligodendroglioma grade III	3	0	2
Oligodendroglioma grade IV	1	0	1
Oligoastrocytoma grade II	14	9	3
Oligoastrocytoma grade III	3	0	3
Oligoastrocytoma grade IV	2	2	0

Supplementary Table 1. Overview of glioma samples used for Sanger sequencing of *IDH1*^{R314C}, with diagnosis and *IDH1* status.