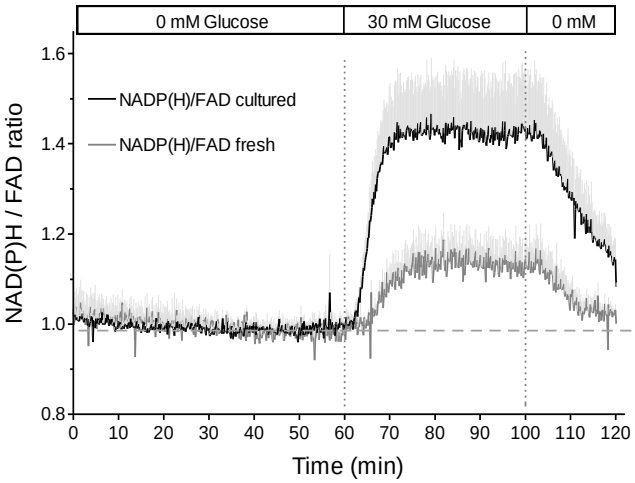
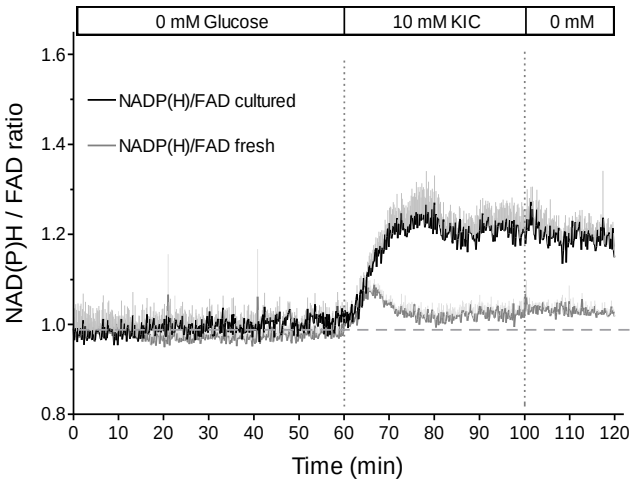
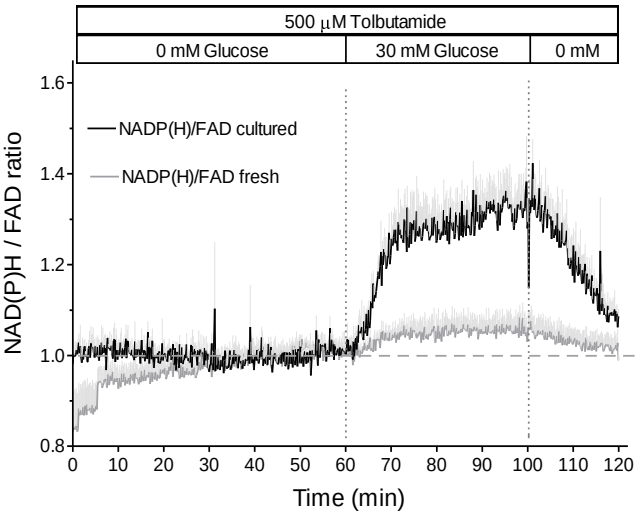

0 mM Glucose
30 mM Glucose
0 mM
NADP(H)/FAD cultured
NADP(H)/FAD fresh
NAD(P)H / FAD ratio
Time (min)


0 mM Glucose
10 mM KIC
0 mM
NADP(H)/FAD cultured
NADP(H)/FAD fresh
NAD(P)H / FAD ratio
Time (min)


500 μM Tolbutamide
0 mM Glucose
30 mM Glucose
0 mM
NADP(H)/FAD cultured
NADP(H)/FAD fresh
NAD(P)H / FAD ratio
Time (min)

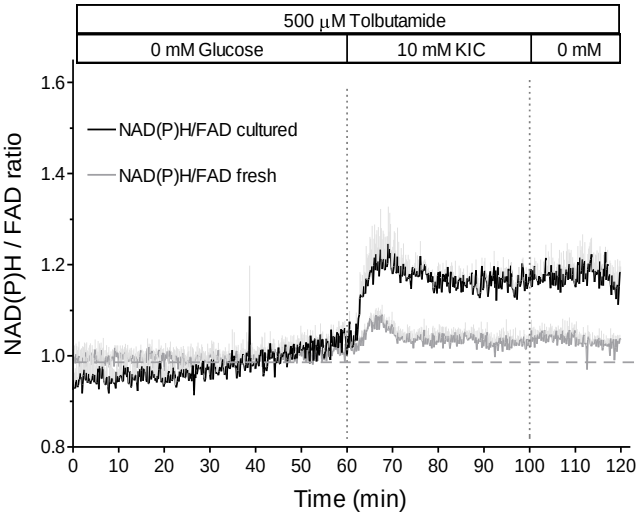

500 μM Tolbutamide
0 mM Glucose
10 mM KIC
0 mM
NAD(P)H/FAD cultured
NAD(P)H/FAD fresh
NAD(P)H / FAD ratio
Time (min)

Fig. S3

Supplemental Figure S3

The graphs depict the ratio of the NAD(P)H /FAD fluorescence traces , when NMRI mouse islets were perifused with 0 mM glucose from 0 min to 60 min, with 30 mM glucose (left) or 10 mM KIC (right) from 60 min to 100 min and with 0 mM glucose thereafter (upper row) or when this protocol was executed in the presence of 500 µM tolbutamide (lower row).

The black traces depict the NAD(P)H /FAD ratio of the 22h-cultured islets , the grey traces depict the NAD(P)H /FAD ratio of the fresh islets. When both traces are normalized to 100 % at 60 min, the larger relative increase of this ratio in cultured islets becomes visible with both nutrients. Nevertheless , the characteristic difference between glucose and KIC is visible in fresh as well as in cultured islets.