

**Table 5**Flux control coefficients obtained *in vivo* (cells) and by kinetic modeling.

Enzyme	$C_{Ei}^J$				
	AS-30D	AS-30D model		HeLa model	
	<i>In vivo</i> <sup>a</sup>	5 mM Glucose	1 mM Glucose	Normoxia	Hypoxia
GLUT +		0.2	0.12	0.39	0.32
HK	0.71 <sup>a</sup>	0.44	0.50	0.08	0.2
HPI +	-0.02 <sup>a</sup>	0.4	0.46	0.05	0.1
PPP +		-0.004	-0.009	-0.009	-0.005
glycogen synthesis		-0.1	-0.1	-0.1	-0.06
Glycogen degradation	NM	0.05	0.11	0.57	0.33
PFK-1	0.06 <sup>a</sup>	0.02	0.03	0.03	0.12
ALDO + TPI + GAPDH + PGK + PGAM + ENO + PYK + LDH	0.24 <sup>a</sup>	0.08 (GAPDH 0.05)	0.009	0.01	0.06
MPM	NM	0.003	0.02	-0.004	-0.001
TK	NM	0.01	0.023	0.014	0.01
ATPases	NM	-0.1	-0.16	-0.02	-0.05

<sup>a</sup> Values taken from [10]. PPP, pentose phosphate pathway; MPM, mitochondrial pyruvate metabolism. NM, not measured. For AS-30D, both conditions were modeled under normoxia. For HeLa, both conditions were modeled in the presence of 5 mM glucose.