

| Step | Ir/reversible | Change in energy | Net result in energy so far | Enzyme | Regulation | Step importance |
|---------|---------------|------------------|-----------------------------|----------------------------|---|---|
| Step 1 | Irreversible | -1 | -1 | Hexokinase | Inhibited by excess G6P | 1. Maintain the influx of glucose 2. Glucose trapping |
| Step 2 | Reversible | - | -1 | Phosphoglucose isomerase | - | 1. Provide an entry point to the cycle 2. Render the residue more reactive |
| Step 3 | Irreversible | -1 | -2 | Phosphofurctosekinase-1 | Inhibitors: citrate & ATP Activators: AMP/ADP & fructose-2,6-biphosphate | Rate limiting step |
| Step 4 | Reversible | - | -2 | Aldolase | - | Cleave the hexose into 2 trioses |
| Step 5 | Reversible | - | -2 | Triose phosphate isomerase | - | Balance between the 2 isomers depending on the cell's needs |
| Step 6 | Reversible | - | -2 | GADP dehydrogenase | - | Formation of 2 NADH cofactors |
| Step 7 | Irreversible | +2 | 0 | Phosphoglycerate kinase | - | Generate the first 2ATP |
| Step 8 | Reversible | - | 0 | Phosphoglycerate mutase | - | Activation of the phosphate group |
| Step 9 | Reversible | - | 0 | Enolase | - | Increase the energy stored in the phosphate bond |
| Step 10 | Irreversible | +2 | +2 | Pyruvate kinase | Inhibited by ATP & Acetyl CoA | Generate the second 2ATP |

