



ILEUSYN-PWY: L-isoleucine biosynthesis I (from threonine)

VALSYN-PWY: L-valine biosynthesis

BRANCHED-CHAIN-AA-SYN-PWY: superpathway of branched amino acid

PWY-5101: L-isoleucine biosynthesis II

PWY-5103: L-isoleucine biosynthesis III

PWY-7111: pyruvate fermentation to isobutanol (engineered)

UNPNAGSYN-PWY: UDP-N-acetyl-D-glucosamine biosynthesis I

THISYN-PWY: superpathway of thiamin diphosphate biosynthesis I

PWY6703: preQ0 biosynthesis

PWY-6897: thiamin salvage II

NAGLIPASYN-PWY: lipid IVA biosynthesis

PWY-1269: CMP-3-deoxy-D-manno-octulosonate biosynthesis I

PWY-6467: Kdo transfer to lipid IVA III (Chlamydia)