PYRIMIDINE METABOLISM PRPP Pentose phosphate pathway Dihydro-orotate UDP-glucose(extracellular) K17828... Orotidine-5P Orotate N-Carbamoyl Pseudouridine-2',3'-Cyclic UMP L-aspartate 5'-phosphate UppppU 3'-UMP K00254 UTP K01518 - Pseudouridine (extracellular) Carbamoyl-P ₩UMP UTP β-Alanine metabolism **▲** UDP 3-Ureido-propionate Unidine Uracil β-Alanine Dihydrouracil 3.6.1.39 Arginine biosynthesis °ФL-Glutamine Barbiturate Malonate TTT 1.1799.4 (extracellular) 3-Oxo-3-ureidopropanoate с**ф**≋Urea **▲**Cytosine Cytidine 4 CTP 2',3'-Cyclic CMP K0111 Ureidoacrylate 3.2.2.10 Alanine, aspartate and glutamate metabolism Thioredoxin Thioredoxin __**__**C**^**42 3'-CMP **©**Carbamate <u>h</u>m5dCDP Malonatehm5dCTP semialdehyde K00527 K19796 K19797 K09018... <u>____</u> hm5dCMP Thioredoxin K18942 Thioredoxin disulfide 3-Hydroxy-(Z)-3-Peroxy-aminoacrylate Thioredoxin disulfide (Z)-3-Ureidoacrylate-Aminoacrylate dCMP propionate peracid Deoxycytidine C20031 K00527 dCTP| dCDP hm5C in DNA K16904 K08722 <u>C00434</u> K09887 Thioredoxin disulfide K01520 Deoxyuridine 🕌 dUDP COT 46 K00758 3.6.1.39 dUMP dUTP Thioredoxin disulfide 5-Methylbarbiturate K08722 1.1799.4 K03465 K00560... C(2)76 3-Oxo-3-ureido-isobutyrate Methylmalonate 5-Methylcytosine L___COO42 Thioredoxin@UDP K08722 K08728 Valine, leucine and isoleucine metabolism dTMP Thymidine (R)-3-Ureido-isobutyrate (R)-3-Amino-isobutyrate (R)-Dihydro-Thymine thymine CQ0972 3.6.1.39 2-Deoxy-D-nbose-1P 00240 2/1/16 (c) Kanehisa Laboratories