

PYRUVATE METABOLISM

This metabolic map illustrates the central role of Pyruvate in various metabolic pathways. Key features include:

- Central Hub:** Pyruvate is a central metabolite that branches into numerous pathways.
- Acetyl-CoA Pathway:** Pyruvate is converted to Acetyl-CoA, which then enters the Citrate cycle or is used for fatty acid biosynthesis and other metabolic processes.
- Lactate Pathway:** Pyruvate can be reversibly converted to L-Lactate and D-Lactate, which are further metabolized to D-Lactaldehyde and L-Lactaldehyde.
- Acetate Pathway:** Pyruvate is converted to Acetate, which can be further metabolized to Acetyl-CoA or used for the biosynthesis of various compounds.
- Other Pathways:** Pyruvate is involved in the biosynthesis of amino acids (e.g., Leucine, Lysine, Fatty acids), nucleotides (e.g., Acetyladenylate), and other metabolites (e.g., Acetoacetyl-CoA, 2-Propylmalate).
- Enzymes and Cofactors:** The map includes numerous enzymes (e.g., ppc, pykF, pdhB, pdhC, lpd, mgo, fumC, leuA, accB) and cofactors (e.g., K01596, K20370, K01610, K01006, K01007, K00027, K00028, K00029, K00025, K00051, K00128, K00138, K00126, K00195, K00106, K00107, K00102, K00101, K00156, K00158, K00169, K03737, K03788, K04020, K01067, K18118, K01905, K00132, K00244, K01638, K00626, K01655, K00074, K00075, K00076, K00077, K00078, K00079, K00080, K00081, K00082, K00083, K00084, K00085, K00086, K00087, K00088, K00089, K00090, K00091, K00092, K00093, K00094, K00095, K00096, K00097, K00098, K00099, K00100, K00101, K00102, K00103, K00104, K00105, K00106, K00107, K00108, K00109, K00110, K00111, K00112, K00113, K00114, K00115, K00116, K00117, K00118, K00119, K00120, K00121, K00122, K00123, K00124, K00125, K00126, K00127, K00128, K00129, K00130, K00131, K00132, K00133, K00134, K00135, K00136, K00137, K00138, K00139, K00140, K00141, K00142, K00143, K00144, K00145, K00146, K00147, K00148, K00149, K00150, K00151, K00152, K00153, K00154, K00155, K00156, K00157, K00158, K00159, K00160, K00161, K00162, K00163, K00164, K00165, K00166, K00167, K00168, K00169, K00170, K00171, K00172, K00173, K00174, K00175, K00176, K00177, K00178, K00179, K00180, K00181, K00182, K00183, K00184, K00185, K00186, K00187, K00188, K00189, K00190, K00191, K00192, K00193, K00194, K00195, K00196, K00197, K00198, K00199, K00200, K00201, K00202, K00203, K00204, K00205, K00206, K00207, K00208, K00209, K00210, K00211, K00212, K00213, K00214, K00215, K00216, K00217, K00218, K00219, K00220, K00221, K00222, K00223, K00224, K00225, K00226, K00227, K00228, K00229, K00230, K00231, K00232, K00233, K00234, K00235, K00236, K00237, K00238, K00239, K00240, K00241, K00242, K00243, K00244, K00245, K00246, K00247, K00248, K00249, K00250, K00251, K00252, K00253, K00254, K00255, K00256, K00257, K00258, K00259, K00260, K00261, K00262, K00263, K00264, K00265, K00266, K00267, K00268, K00269, K00270, K00271, K00272, K00273, K00274, K00275, K00276, K00277, K00278, K00279, K00280, K00281, K00282, K00283, K00284, K00285, K00286, K00287, K00288, K00289, K00290, K00291, K00292, K00293, K00294, K00295, K00296, K00297, K00298, K00299, K00300, K00301, K00302, K00303, K00304, K00305, K00306, K00307, K00308, K00309, K00310, K00311, K00312, K00313, K00314, K00315, K00316, K00317, K00318, K00319, K00320, K00321, K00322, K00323, K00324, K00325, K00326, K00327, K00328, K00329, K00330, K00331, K00332, K00333, K00334, K00335, K00336, K00337, K00338, K00339, K00340, K00341, K00342, K00343, K00344, K00345, K00346, K00347, K00348, K00349, K00350, K00351, K00352, K00353, K00354, K00355, K00356, K00357, K00358, K00359, K00360, K00361, K00362, K00363, K00364, K00365, K00366, K00367, K00368, K00369, K00370, K00371, K00372, K00373, K00374, K00375, K00376, K00377, K00378, K00379, K00380, K00381, K00382, K00383, K00384, K00385, K00386, K00387, K00388, K00389, K00390, K00391, K00392, K00393, K00394, K00395, K00396, K00397, K00398, K00399, K00400, K00401, K00402, K00403, K00404, K00405, K00406, K00407, K00408, K00409, K00410, K00411, K00412, K00413, K00414, K00415, K00416, K00417, K00418, K00419, K00420, K00421, K00422, K00423, K00424, K00425, K00426, K00427, K00428, K00429, K00430, K00431, K00432, K00433, K00434, K00435, K00436, K00437, K00438, K00439, K00440, K00441, K00442, K00443, K00444, K00445, K00446, K00447, K00448, K00449, K00450, K00451, K00452, K00453, K00454, K00455, K00456, K00457, K00458, K00459, K00460, K00461, K00462, K00463, K00464, K00465, K00466, K00467, K00468, K00469, K00470, K00471, K00472, K00473, K00474, K00475, K00476, K00477, K00478, K00479, K00480, K00481, K00482, K00483, K00484, K00485, K00486, K00487, K00488, K00489, K00490, K00491, K00492, K00493, K00494, K00495, K00496, K00497, K00498, K00499, K00500, K00501, K00502, K00503, K00504, K00505, K00506, K00507, K00508, K00509, K00510, K00511, K00512, K00513, K00514, K00515, K00516, K00517, K00518, K00519, K00520, K00521, K00522, K00523, K00524, K00525, K00526, K00527, K00528, K00529, K00530, K00531, K00532, K00533, K00534, K00535, K00536, K00537, K00538, K00539, K00540, K00541, K00542, K00543, K00544, K00545, K00546, K00547, K00548, K00549, K00550, K00551, K00552, K00553, K00554, K00555, K00556, K00557, K00558, K00559, K00560, K00561, K00562, K00563, K00564, K00565, K00566, K00567, K00568, K00569, K00570, K00571, K0057