

Supplementary file 1. Accession numbers of enzymes used to construct databases. Retrieved from the NCBI on April, 2017.

BphA1 – Biphenyl 2,3-dioxygenase subunit alpha (EC 1.14.12.18)

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BenA – Benzoate 1,2-dioxygenase (EC 1.14.12.10)

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CatA – Catechol 1,2-dioxygenase (EC 1.13.11.1)

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CatE – Catechol 2,3-dioxygenase (EC 1.13.11.1)

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PcaG – Protocatechuate 3,4-dioxygenase (EC 1.13.11.13)

ANR63240.1, KGB22216.1, AMY10771.1, WP_004926643.1, ENV54240.1, ENW04019.1, ENW03846.1, CEI51414.1, ENV97935.1, ENV23124.1, ENU19631.1, ENV82385.1, ENV47541.1, ESK51485.1, D35119, GAM30334.1, ENV92885.1, EOQ64312.1, ENV98713.1, ENU09440.1, ENV33248.1, EPR80640.1, ENU58463.1, EPH34107.1, ENV17429.1, EPF83293.1, EPH31241.1, ESK48120.1, ENW17245.1, EPR87961.1, ENW20774.1, SJX23156.1, ENV72344.1, ENU39848.1, ENV64127.1, EKF45177.1, ENU47985.1, ENV39432.1, ESK45333.1, ADI90575.1, AMX19615.1, ENW11977.1, EOQ70831.1, EOQ72911.1, ENW11163.1, EPF73933.1, ENV44574.1, ENU41633.1, ENV57678.1, ENV59981.1, P20371.3, ENU80917.1, ENX01398.1, ENX60772.1, ENW79937.1, ENW91683.1, EOR06808.1, ENV08671.1, ENX13149.1, ENX58621.1, ENU30023.1, KHF78251.1, ENX06114.1, ENX33721.1, ENX52191.1, EPG37431.1, ENX41914.1, ENX22972.1, ENU26717.1, ENX37343.1, ENX44823.1, ENU91925.1, ENU23817.1, ENV03285.1, EEX00089.1, EOR05753.1, ESK56433.1, ENV78913.1, ENV77095.1, ENX47822.1, KXZ62782.1, KXZ66347.1, ENV36760.1, SJM49504.1, AHG65639.1, AAK88904.1, NP_356119.1, CUX37532.1, CUX04433.1, CUX04252.1, CUX54236.1, CUW96037.1, CUX59538.1, CUX47280.1, CUX62456.1, CVI57629.1, CUX39608.1, CUX54884.1, CVI62633.1, EGL61828.1, SCX15461.1, SCX10049.1, AAF34267.1, KJX85741.1, AHK04270.1, CVI24136.1, CUX35404.1, CVI21039.1, CUX48361.1, KZE94738.1, EMD28499.1, OAP22421.1, SBO13832.1, SBO30335.1, SBO30276.1, SBO30712.1, SCV62138.1, SCV61700.1, SCV61895.1, SCV61886.1, CEA08896.1, GAP59430.1, BAS11633.1, GAP56835.1, BAS15319.1, AFR31058.1, CAE17507.1, CEJ11518.1, CCG03868.1, AKQ54219.1, AKQ58733.1, GAU81889.1, EGP06408.1, BAR56683.1, BAR59323.1, BAC46193.1, BAC47599.1, AHY48957.1, AHY55397.1, BAL06235.1, BAL12754.1, GAJ30887.1, GAJ32257.1, BAL78888.1, BAL80061.1, AOP52489.1, AKO29691.1, AHB00883.1, AHB03302.1, ALM36080.1, AAL53877.1, AEQ10310.1, WP_011882025.1, CDN62984.1, CAR55155.1, ESS38670.1, P15109.1, ALJ73351.1, SAK75110.1, ERJ38116.1, AFJ88837.1, KFC82268.1, CDY79762.1, ACL95957.1, YP_002517865.1, EKB49648.1, EKE67962.1, CBG88376.1, AIY40936.1, AEK61908.1, AGG67454.1, AHI19323.1, BAV24006.1, SJM60075.1, AGN19899.1, AGN22924.1, EPP40002.1, ANR66246.1, AGF73219.1, AJE33885.1, AGS35515.1, SLM87652.1, AJG23938.1, KWW39628.1, SCU76281.1, AKQ44183.1, CDP54149.1, AKR55470.1, KFC68074.1, ANI91158.1, ANI93112.1, ABV95209.1, OFA03908.1, AHK46001.1, CDL57805.1, CAQ89020.1, EGC95150.1, SJM58987.1, OBX34772.1, CDG52706.1, KIT15215.1, CTQ51186.1, CUH33185.1, AEM42881.1, YP_005796634.1, ADO44229.1, CEL17165.1, AML35112.1, AFN32326.1, KFD06080.1, EME37762.1, AHH95580.1, CTQ44123.1, CTQ55488.1, CTQ60477.1, CTQ73942.1, CTQ66005.1, CTQ74738.1, CUI01725.1, SJN12146.1, EAQ05479.1, ESR23221.1, KWS04485.1, AFP30260.1, AQZ51587.1, ADD29443.1, BAB53362.1, AEH90262.1, CDX33038.1, CDX59781.1, CDX15877.1, CDX50480.1, SIT53648.1, CDX17774.1, CDX46787.1, KJL36111.1, KJL42954.1, SJN30847.1, CCH90486.1, SIH07685.1, SKY10011.1, SLI24841.1, SKU01085.1, SKT75706.1, AGL36028.1, KMO72717.1, KMO84528.1, AFS15389.1, AFP39008.1, CRL15267.1, CRL10728.1, GAW56108.1, GAW51517.1, SIO89221.1, SBO93985.1, EMR00337.1, CFB62816.1, CRH30807.1, CRH39842.1, CRH35663.1, EHU01991.1, ALL68677.1, SIT46898.1, SIT46773.1, AEQ51728.1, AFO86235.1, AFO89989.1, CUH89079.1, APG45650.1, WP_003251601.1, WP_012274187.1, WP_028699860.1, KIH82912.1, ALQ02017.1, ALQ06122.1, CZT29565.1, KZO46725.1, AMO74779.1, CEL27954.1, KIR13318.1, KIR16573.1, KIR20907.1, AKA85071.1, KWV70015.1, KWV76993.1, KWV82433.1, KWV87081.1, AMW85413.1, AEV61369.1, ABA73014.1, CAY47621.1, CDF83713.1, ELS28412.1, BAU74541.1, AMK32996.1, ANY89469.1, OLS64729.1, AFO46687.1, AAN70228.1, KPB13318.1, SAM32345.1, CRM92372.1, CRM90553.1, CRM31034.1, CRM56231.1, CRM01085.1, CRM03389.1, CRM54835.1, CRM02947.1, CRM17330.1, CRM27324.1, CRM51345.1, CRN01371.1, CRM35930.1, CRM60715.1, CRM45032.1, CRM27277.1, CRM47415.1, CRM28496.1, CRM85054.1, CRI55306.1, KIV75483.1, ENA35908.1, EMZ52562.1, EZP62339.1, CDF93622.1, WP_027609105.1, CRL48445.1, CRN08035.1, KUR44593.1, KUR46977.1, SBW81955.1, OJG06901.1, OLL76171.1, OLL82170.1, OLL83716.1, OLL99784.1, OLL90244.1, OLM02466.1, OLM12700.1, OLM24038.1, OLM16930.1, OLM30014.1, KZL22145.1, KZK84181.1, KZL08945.1, KZL13443.1, KZL25741.1, KZK89431.1, KZK92611.1, AEV36790.1, KZK88683.1, KZL01343.1, KZL18341.1, GAF53240.1, GAF53241.1, GAF59662.1, CAJ97072.1, ALF88217.1, ANH33208.1, AGH84001.1, EAP70718.1, ALQ47002.1, KFD05894.1, CDM61488.1, CCM79352.1, CDI10013.1, CCF21468.1, KIV66784.1, SEH72413.1, OFV77751.1, AMY55036.1, AHK32654.1, AHZ92261.1, OQM81412.1, KJF21134.1, KJF24671.1, AJW38426.1, GAU56698.1, GAW57866.1, CCW10647.1, AMY25793.1, CRK49277.1, AHM05848.1, AEI92697.1, GAV34918.1, CUJ97043.1, CAM02787.1, EPX82248.1, CDJ77644.1, KYG14072.1, AGO55324.1, ANS43051.1, ONK20112.1, KPA20738.1, EYR83632.1, CCE99574.1, ACP23566.1, AGG72498.1, CCM69656.1, CCM71500.1, CRD48846.1, GAQ58984.1, GAV45127.1, EFE66581.1, OAH12562.1, CQR60588.1,

EOY51748.1, CUW32499.1, GAQ65475.1, SFY51116.1, GAQ73899.1, CUM36338.1, WP_012894012.1, ACZ90282.1, KIN70084.1, KHA53951.1, EAP83383.1, EAP79468.1, CUH63332.1, CUH71973.1, CUH78992.1, BAT57905.1, KLN52380.1, KWT94710.1, CDQ34098.1, EAL60186.1, GAE49506.1, AEO40666.1, EKQ65550.1, EKQ62602.1, CCF68431.1, AGH75914.1, CAP49725.1, CEM56602.1, AAY47465.1, AAM39687.1, NP_635763.1, CAJ22013.1, EFF46435.1, EFF42360.1, ETC90056.1, AAW73737.1, BAE67204.1, AAM35260.1, CEH44407.1, CEF22318.1, CCM83462.1, CCM88254.1, KUF57627.1, ETU95543.1, ETU91320.1, ERU88348.1, ERU38566.1, ERU36451.1, CRZ27740.1, ERX69665.1, ERZ16002.1, ERU90627.1, ERU89092.1, EYT99336.1, EOT25131.1, EZO29762.1, EZO48220.1, GAJ54660.1, ERX16591.1, ERX53733.1, ETU75598.1, ETU91320.1, ERU88348.1, ETU91320.1, ERU88348.1, AHC74272.1, EMZ46059.1, ERX29079.1, ERX52455.1, ERX17722.1, ERX53733.1, ETU75598.1, ENW72197.1, CDM72461.1, EZF18261.1, AHB91251.1, SMD55675.1, SMD57456.1, EKB39452.1, EKB38349.1, EKB41783.1, EGT89850.1

LigA – Protocatechuate 4,5-dioxygenase (EC 1.13.11.18)

AKH42093.1, AKH42943.1, AKH44234.1, ANY19599.1, ESS14138.1, WP_023473079.1, CDY77327.1, KMW57806.1, CDM24159.1, CDM24173.1, KWT70407.1, CBA31488.1, KNH02525.1, ETN93046.1, CZF78611.1, EOD77251.1, CZF86066.1, EWS65021.1, ALK91898.1, ALK91915.1, ALK88356.1, BAE49061.1, KIL98102.1, KEA61686.1, KEA65774.1, SBS27504.1, SBS27511.1, SBS25232.1, SBT21532.1, SBT18577.1, SBS36326.1, SBS26396.1, SBS40126.1, SBS31734.1, OAU94636.1, OAU98691.1, OAV04500.1, EXJ10145.1, EXJ10154.1, GAO55097.1, GAO53968.1, WP_007272404.1, EMQ97442.1, WP_008302236.1, GAC03412.1, GAC34212.1, OJI91727.1, WP_015063457.1, OJG06796.1, WP_023491048.1, KEY60964.1, AFU63342.1, YP_006965773.1, WP_006959334.1, CCW18562.1, BAK64854.1, BAK65926.1, BAK68428.1, WP_014075577.1, P22635.1, GAQ73356.1, CUH67795.1, CUH67825.1, WP_020331280.1, AQM66785.1, EPP22434.1, EPP20929.1, CDT81158.1, CDU12670.1, CDT86103.1, CDT71918.1, WP_023902950.1, CAJ22545.1, ETC89302.1

BoxA – Benzoyl--CoA oxygenase (EC 1.14.13.208)

AAA92151.1, CAJ18317.1, ALD92563.1, ALD90815.1, CAE26105.1, AJY49441.1, AGW89784.1, AEI80834.1, CQR41222.1, KJE78045.1, KFJ13590.1, KAK89552.1, KAK85583.1, KAK95563.1, KAK89605.1, EXF88665.1, EWM51411.1, EWM47254.1, EWM42236.1, CUJ87986.1, CUJ93229.1, CUK25323.1, KCB22839.1, GAQ52947.1, GAQ60681.1, GAQ71137.1, CUH70870.1, CZF80035.1, CUW31829.1, ALJ74928.1, CTQ68539.1, ALF89570.1, KKO65139.1, KJL33286.1, KFD30749.1, ONI49346.1, SIT42862.1, SIT38669.1, GAV39499.1, SCU81840.1, SCU95029.1, SFY48835.1, OZ96375.1, OZ67717.1, OZ61642.1, OZ46087.1, OCC11874.1, SBO09242.1, AMY20068.1, OAH13917.1, OAH06139.1, KZL17720.1, AIT26671.1, AHV93472.1, WP_020926743.1, CKI05028.1, CKG81668.1, AKP91557.1, AHC49310.1, CCH07464.1, KTL18459.1, KOQ55516.1
