PL2

>**gb|ACS85823.1| Pectate disaccharide-lyase [Dickeya dadantii Ech703]**MSIFSDLNTSRKWQIERWLSAINSHIEKVQTCAQSVVNPTPLFADGFDVKTLTPVVWKFPDGHDAPISNFASQQNWLRLLISMSEVTETEKYRQSAFEQCRYFLNHFVDDKSGLFFWGGHRFINLDTLSSEGPESKSLVHELKHHLPYYELLLDLEPEKTLNFIQGFWNAHVENWESLDLGRHGDYAKVRDPNVFTHVRHDVVDPSRWPELPLTKGLTFVNAGTDLIYAAFAYTRHTGDPQAAAWGKHLYRQYVLARNPETGMPVYQFSSPIQRQPAPADDNQTQSWFGDRAQRQFGPEFGAIAREANVLFRDMHPLLADNPLAMLEILRRQPDHEMLTWVITGLKNYYQYAYDADTNTLRPMWNNGQDMTGYRFQRDGYYGKAGTELKPFPIEGDYLLPLVRAWRLSGDSELDSLISTLLSRLEKQGIHQAASPFLLLAVIELAEEKQSAQWAEYAWQLAEILFNRYFHHGLLMRSEHHRYIRLDDPFPAILLTLIAACRNKLSTLPTILTQGGYVHGDFRINGQSKVIYDVEFIYPELLTH  
  
>**gb|ACT06819.1| Pectate disaccharide-lyase [Dickeya zeae Ech1591]**MSIFTDLNTSRKWQIDQWLSAINSHIEKIQQCGHSQINPTPLLVDGFEIKTQSPVVWQFPDGHDAPISNFASQQNWLKLLVSMSVVTETEKYRQSAFSQCEYFLDHFVDDNSGLFYWGGHRFINLDTLTTEGPESKSLVHELKHHLPYYEFLYQVNPEKTHHFIQGFWNAHVENWDCLDLGRHGDYARPRDPHVFLHTRHDVVDPAKWPELPLTKGLTFVNAGTDLIYAAFVYARHNDDVHAANWGKHLYRQYVLARNPETGMPVYQFSSPLQRQPVPADDNQTQSWFGDRAQRQFGPEFGAIAREANVLFRDMRPLLIDNPLAMLDILQHHPDTDMLTWVITGLKNYYQYAYDVDSNSLRPMWNDGQDMTGYCFKRDGYYGKAGTILQPFPLEGDYLLPLVRAWCLSDDDDLYTLIVTMLSRLEKQGIHQSASPFLLLAITELAQAKQSAQWAEYAWQMAEILFKRYFHHGLFVRSEHHRYVRLDDPFPVILLTLIAACRNKWSEIPAILTQGGYIHGDYRINGESRVIYDTEFIYPEKLIQ  
  
>**gb|ACZ76819.1| Pectate disaccharide-lyase [Dickeya dadantii Ech586]**MSIFTDLNTSRKWQIDQWLSAINSHIEKIQQYAHSAVNPTPLLADGFEIKTQSPVVWRFPDGHDAPISNFASQQNWLRLLISMSAVTETEKYRQSAFAQCEYFLDHFVDENSGLFYWGGHRFIHLDTLASEGPESKSLVHELKHHLPYYEFLYQVNPEKTHHFIQGFWNAHVENWDSLDLGRHGDYAKVRDPQVFEHARHDVVDPARWPELPLTKGLTFVNAGTDLIYAAFAYARHSGDTHAADWGKHLYRQYVLARNPETGMPVYQFSSPLQRQPVPADDNQTQSWFGDRAQRQFGPEFGAIAREANVLFRDMRPLLIDNPLAMLDILQHRPDAETLTWVITGLKNYYQYAYDVDSNSLRPMWNDGQDMTGYCFKRDGYYGKAGTVLKPFPLEGDYLLPLVRAWRLSHDSDLYTLIMTMLSRLEKEGFHQSASPFLLLAITELAHTQQSAQWAEYAWQMAEILFKRHFHHGLFVRSEHHRYVRIDDPFPAILLTLIAACRNKWQEIPTILTQGGYIHGDYRINGESRVIYDTEFIYPEKLIH  
  
>**gb|ADM98617.1| exopolygalacturonate lyase [Dickeya dadantii 3937]**MSIFTDLNTSRKWQIDQWLSAVNSHIEKIQQYGHSVVNPTPLLADGFEIKTQSPVVWQFPDGHDAPISNFASQQNWLRLLISMSVITETEKYRHLAFCQSEYFLNRFVDENSGLFYWGGHRFINLDTLASEGPESKSMVHELKHHLPYYEFLHQVNPEKTRHFIQGFWNAHVEDWSCLDLGRHGDYARQRDPDVFLHSRHDVVTPANWPELPLTKGLTFVNAGTDLIYAAFVYARHTGDAHAAAWGKHLYRQYVLARNPETGMPVYQFSSPLQRQPVPADDNQTQSWFGDRAQRQFGPEFGAIAREANVLFRDMRPLLIDNPLAMLDILRHQPDAEILTWVIAGLKNYYQYAYDVNSNSLRPMWNNGQDMTDYCFKRDGYYGKAGTVLKPFPLEGDYLLPLVRAWLLSDDDDLHTLIVTMLSRLEKQGIHQSASPFLLLAITELAHAKQSAQWAEYAWQMAEILFKRYFHHGLFVRSEHHRYVRLDDPFPAILLTLIAACRNKWSEVPAVLTQGGYIHGDYRINGESRVIYDTEFIYPEKLIH

PL3

>**gb|ACT06136.1| Pectate lyase [Dickeya zeae Ech1591]**MFKYVLPLCALTLAAPSFAAQTTLMMTQKNDVNYLGWSTDESKVVRQEVYRGTTSNADLRERIAVLDAETRTFKDADTNSGVNYWYWVDVVGDNQTPTESNAVTTAPQTGPLRAAKASSECKPGATFENRSVDCGGVTIGTSCPNDSDKQKPLIILKNASVKNLRISASGGADGIHCDSGNCTIENVIWEDVCEDAATNNGKTMTIIGGIAHNANGGYGGKPDKVLQQNAKNSTTVVKGNFTLTGEHGKLWRSCGDCTNNGGPRFLSVDGLIVNGTIGSIAGVNRNYGDVATLKNIKIKNYKEGKPKVCEEYIGVEKGNGKSEKYKEEDQWNTANCKVSRSDVTKL  
  
>**gb|ACT06866.1| Pectate lyase [Dickeya zeae Ech1591]**MADISITLSIPSAGLQGGLGGVGGADRTSNNGLGSNGLSGNKTSQEGKLLEALAVILTSLLGNAGAQGNGGNPLERSNGALGGDNGAGSAGGAQGGGLGNSQGLGGGQGQNGLGDLLTKLLDILMPKDGSQGGQGLQGNGGVGGNGGLSGAQGAGGAQGAGGTSGLEDLSKSLLQDTGESALSNGISPTQDGGGQIGDNPLLKILLALVAMLMENQKNQFGQPQDGAGNNSGGSSTPSVGGGAGGGASPSVGGGAGGGASPSVGGGAGGGASPSVGGGAGGGASPSVGGGAGGGASPSVGGGAGGGASPSVGGGAGGGASPSVGGGAGGSTTPSVGGGGGAASSVGGGNATGATGDSGTASTSSAGKSGPVSFPTADNANAIVVNEPIKVGPGEVFDGKGKTYVAGPALGDGGQKEGQKPLFEVADGGSVKNVTFGNNAADGIHLHGDAKIDNVHWTNVGEDALTVKSNTGKPANVSITNSSAQGASDKIFQLNADANFNVDNFKAKDFGTFVRTNGGQQGNWNLNLSNIDAQNGKFSFVKSDSEGLNVKVNNANLDNVNNHYKVPKSTNLQVS  
  
>**gb|ACZ76858.1| Pectate lyase [Dickeya dadantii Ech586]**MSDISITLRIPSVGLTNGVGGADRITNNGLSNNGPSGAQTSRGTPASASTSNLENLSKSLLQDAGESALGNSISPTQDGGGQIGEDPLSKLLLSLIAMLMENQKNQHTQPQADRGSALPANGANGGAAPSVGNNARSNNVANSNATGNTPGVTPGDTTGSVPTSGSGKSGPVSFPTADNANAIVVNEPIKVGPGEVFDGKGKTYVAGPALGDGGQKEGQKPLFEVADGGSVKNVIFGNNAADGIHLHGDAKIDNVHWTNVGEDALTVKSNTGKPANVSITNSSAQGAADKVFQLNADANFSVNNFKVKDFGTFVRTNGGQQGNWNINLSNIDAQNGKFSFVKSDSEGLKVNVNNASLDNVNNHYKVPKSTTLQIH  
  
>**gb|ACZ77772.1| Pectate lyase [Dickeya dadantii Ech586]**MFKYVLPLCALVLAAPSLATQTTLMLSQKSDVNYLGWSTDASKVVRQEVYRGTTSNPDLRERIAVLDAETRTFNDADTNSGVNYWYWVDVVSDNQNQTVSNVVTTTPSTGPLRAAKASSECKPGVTFENRTVDCGGVTIGTSCPNDSDKQKPLIILKNATVKNLRISASGGADGIHCDSGDCTIENVIWEDICEDAATNNGKTLTIVGGIAHNVSGGYGGKPDKVLQHNSKNSTTVVKGNFTLTGEHGKLWRSCGDCSNNGGPRFLTVTSATVNGTIDSIAGVNRNYGDVATISGLKIKNYKEGKPPVCEEFKGVVKGQGSTEKYGEKWDTANCKVSRSGVSKL  
  
>**gb|ADM98564.1| type III secreted protein [Dickeya dadantii 3937]**MADISITLSIPNAGLQGGLGGLGGADRTSNSGLGNNGLSGNKSSSQDTKLLEALAIVLTALLSNNGGTQGSGNNPLERSNDAIGGNSGAGGAQNGGLGNNQGLGGGQQGQNGLGDILTKLMDILMPKNGAQGGQGLQGNGQGGGTSGNGGLSGAPGAGGAQGAGGAQGTGGTSDLEGLGKSLLQDSGESALSNGISPTQDGGGQISDNPLLKILMALIAMLMENQKNQFGQPQDGAAGNNGGSAAPSVGGGAGGGAAPSVGGGAGGGAAPSVGGAGGGAAPSVGGGAGGGAAPSVGGGAGGGAAPSVGGGAGGGAAPSVGGGAGGGAAPSVGGGSTPTVGGGNATSAAGDTNSAASTGSAGKAGPVSFPTADNANAIVVNEPIKVGPGEVFDGKGKTYVAGPALGDGGQKEGQKPLFEVADGGSVKNVIFGNNAADGIHLHGDAKIDNVHWTNVGEDALTVKSNTGKPANVSITNSSAQGASDKVFQLNADANFNVDNFKAKDFGTFVRTNGGQQGNWNLNLSNIDAQNGKFSFVKSDSEGLNVKVNNANLDNVNNHYKVPKSTNLQVS  
  
>**gb|ADM99410.1| endo-pectate lyase [Dickeya dadantii 3937]**MFKYVIPLCALTLAAPSFAAQTTLMLSQKSDVNYLGWSTDESKVARQEVYRGTTSNPDLRERIAVLDAETRTFKDADTNSGLNYWYWVDVVSENQAQVVSNAVTTAPNAGPLRAAKASSECKPGATFENRTVDCGGVTIGTSCPNDSDKQKPLIILKNATVKNLRISASGGADGIHCDSGNCTIENVIWEDICEDAATNNGKTMTIVGGIAHNAKDGYGGKPDKVLQHNSKNSTTVVKGNFTLTGEHGKLWRSCGDCSNNGGPRFLTVTSATVNGTIDSIAGVNRNYGDVATISGLKIKNYKEGKPPVCEEFKGVVKGQGSTEKYGEKWDTTNCKVSRSGVSKL

PL4

>**gb|ACT06995.1| Rhamnogalacturonate lyase [Dickeya zeae Ech1591]**MSSPFNEGKAGNHIQPVSSSWVRVVSMTWIKGKTYMQGRTYLIAVSLLCSSLAQAASSSDVSMALSGMKAQIDNGLVSVAIGSDGSIGTLSNGSQNLIDKANSQVNALGKSSTGYLDYYSGSFLKFKPQQISVIENSKDIVHVAYIDNETSTLSLEYHFIVRRGVSGIYSYAVARNDTSSNLTVSELRGVYRFNPFLLDHISNGIRTTKPYLYSQLNNFEKIQDETWKLPDGSYYSKYDFAGYMRKTPVWGVYGNNIGAWIIPGSTEYMSGDDTKQDLMVHQDGLAIMYMTGSHFGTPDLIAPPGWQKLYGPWLLYVNAGSDDQMYRDALTRSQQEIADWPYKWVNDSRFPLDRTSVTGSINTTQPLNVTLSSSLNEASDVQTLGYAFTTNTDSQGNFRFDKVRKGKYTLTVYANGGNRPGVLYSDVVNVTGATQIPAIQLSEAAPVVWSIGKSDRLASEFRFGDQLRNYHWQNDVPANLAYTVGQSSPAQDWYYAQTNPGSWNVNYVDRADGSGRVLNVAFAAASNRGMTNPTTPSLSVLVNGTKVKDIQYDNDKALYRGAMNSGKYHYERISIDSGLLRDGNNTITFTLNGGTFMYDAVTLTK  
  
>**gb|ACT08051.1| Rhamnogalacturonate lyase [Dickeya zeae Ech1591]**MMKPLQAWRTPLLTLAFVLPLTATGAVQLTLDGMNSTLDNGLLKVRFGADGSAKEVWKGGTNLISRLSGAARDPDKNRSFYLDYYSGGVNEFVPERLNVIKQTPDMVHLAYIDDQNGKLRLEYHLIMTSGVSGLYSYVVAANTGAAPVTISELRNVYRFDATRLDTLFNSIRRGTPLLYEELEQLPKVQDETWRLPDGNVYSKYDFAGYQRESRYWGVMGNGYGAWMVPASGEYFSGDALKQELLVHQDAIILNYLTGSHFGTPDMVAQPGFEKLYGPWLLYINQGNDRELVADVSRRAEHERASWPYRWLDDSRYPRARATVSGRLRTDAPHATVVLNSSKEEFDVQTTGYLYTTRTHRDGRFNLDNVPPGEYRLSAYADGGTQIGLLAQQTIQVDGKKTRLGQIDAQRPAPLVWAIGQADRRAEEFRFGDKLRQYHWQTEVPANLTFDIGKSRERKDWYYAQTQPGSWHIQFTTRTPEQPYTLNIALAAASNSGMTTPASSPQLAVKLNDQLLTTLKYDNDKAIYRGAMQSGRYHEAHIPLPAGILQPGSNRITLELQGGMVMYDAITLTETPSRTQP  
  
>**gb|ACZ76952.1| Rhamnogalacturonate lyase [Dickeya dadantii Ech586]**MQSRKMLIAISILGSSLAQAASPSDVSVGLSGMKAQIDNGLVSVAIGSDGSIGTLSNGSQNLIDKANSQVNALGKSSTGYLDYYSGAFLKFKPQQISVIENTKDIVHIAYIDNETSALSLEYHFIVRRGVSGIYSYAVARNDTSSNLTVSELRGVYRFNPFLLDHISNGIHTTKPYLYSQLNNFEKIQDETWKLPDGSYYSKYDFAGYMRKTPVWGVYGNNIGAWIVPGSTEYMSGDDTKQDLMVHQDGLAIMYMTGSHFGTPDLIAPPGWQKLYGPWLLYVNAGTDEQMYSDALARSLQEIASWPYNWVNDSRFSVDRASVTGSVNTTVPLNVTLSSSLNEASDVQTLGYAFTTNTDSQGNFRFDKVRKGKYTLTIYANGGSRPGVLYSDVVNVTGNTPIPAIQLAQAAPVVWAIGQSDRLASEFRFGDQLRNYHWQNDVPANLTYTIGESSPAQDWYYAQTNPGSWNVNYIDRADGSSRVLNVAFAAASNRGMTNPTTPSLSVLVNGTKVKDIQYDNDKSVYRGALNSGKYHYERIPIDSGLLRDGTNTITFTLNGGTFMYDAVTLTK  
  
>**gb|ADM97186.1| Rhamnogalacturonate lyase precursor [Dickeya dadantii 3937]**MHMNKPLQAWRTPLLTLIFVLPLTATGAVKLTLDGMNSTLDNGLLKVRFGADGSAKEVWKGGTNLISRLSGAARDPDKNRSFYLDYYSGGVNEFVPERLEVIKQTPDQVHLAYIDDQNGKLRLEYHLIMTRDVSGLYSYVVAANTGSAPVTVSELRNVYRFDATRLDTLFNSIRRGTPLLYDELEQLPKVQDETWRLPDGSVYSKYDFAGYQRESRYWGVMGNGYGAWMVPASGEYYSGDALKQELLVHQDAIILNYLTGSHFGTPDMVAQPGFEKLYGPWLLYINQGNDRELVADVSRRAEHERASWPYRWLDDARYPRQRATVSGRLRTEAPHATVVLNSSAENFDIQTTGYLFSARTNRDGRFSLSNVPPGEYRLSAYADGGTQIGLLAQQTVRVEGKKTRLGQIDARQPAPLAWAIGQADRRADEFRFGDKPRQYRWQTEVPADLTFEIGKSRERKDWYYAQTQPGSWHILFNTRTPEQPYTLNIAIAAASNNGMTTPASSPQLAVKLNGQLLTTLKYDNDKSIYRGAMQSGRYHEAHIPLPAGALQQGGNRITLELLGGMVMYDAITLTETPQ

PL5,6,7,8

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PL9

>**gb|ACS85679.1| conserved hypothetical protein [Dickeya dadantii Ech703]**MEKRHLFVSTALAALALVNSNVAFAADCSSDTNSGIDGASRVYYVSPTGSSSNSGNSFSAPMSFSAALSAVNPGEMILLKPGTYTVTYTASKANTIKFSKSGSSGSPIYVVAANCGKAVFDFSFPADQWVQASYGFYVTGNYWYFKGVEVTRAGYQGAYVTGSHNTFENTAFHHNRNTGLEINNGGSYNTVLNSDAYRNYDPKKNGSMADGFGPKQKQGPGNRFVGCRAWENSDDGFDLYDTTEKVVIENSWAFRNGIDFWSDSSFAGNGNGFKLGGNKAAGNHRITRSVAFSNVSKGFDQNNNTGSVTVVNNVSYKNGINYGFGNDVASGQKHYFRNNVSLSGSVTVSNADAKYNSWDTGPAATSSDFASLDTTLATVARDSDGSLQENALFRLSADSKLINAGTKVDGISYLGSAPDLGAFEKN  
  
>**gb|ACS85991.1| pectate lyase [Dickeya dadantii Ech703]**MKMNTQVVPVVLGLMAAGYAAEGLAAEYYLSASGSDSASGSKSAPWKTFARAQETLSAGDTLWIRGGTYAITAGLNTCSSQTDTVNAITLSKSGSSGKPIVYQAYSGETPIVDFSGMTDDCRVKGFNVVASWITLKGLEIKGVPQNNNKNHESWGVWINGSHNIFERLNIHHIMGTGLFLKNGSYNTILNSDSHHNYDPLTSNGAGQSGDGFGAHVSANMPGNIFSGCRAWWNSDDGFDLINAYSSVTIENSWAWLHGYLPGTTTSLAAGNGNGFKAGGYAGVYVSNGVKHTVRNSVAFLNKASGFYANHHTVANDFFNNTAYKNKINFNMLGIDSSGSDTNLGTLRNNISYAATSSSLSNTSGANLRYNSWNFSNVLSDTEFQSVSTSGWDAARQSDGSLPVLKSLHLASGSWMIDKGGDVKIAYQGSAPDLGAFELK  
  
>**gb|ACS87748.1| exopolygalacturonate lyase [Dickeya dadantii Ech703]**MRYRVPGLITIALHSFLLLGTSPSFAADNNAAPVWHSITFGQSTDVNFSSNVLPEKIGVNDVTINGKKLTPEDKADLSAPITIESRGGKIANTHDGLTFFYTRLPANVNFVLQSEVTVDQFGPENNAKPAAQEGAGLLVRDVLGVPRQNPLQEGYEEFPAASNMVMNAIMTQDKKSKTEVKLQAIVRNGVTQPWGNQGAQIFRNSYQEKINLEQTPSFRLKLERTNEGFVTAYAPTGSDQWVTKTVKGADLVTRQDKDYYYVGFFASRNAKITVSNASLTTSPAQTASSPVFTAKTYTPLLQVASSTQSASDTYQLQARVNYRGTVEAFQDGKPLGKAQNINAGDLFSLSTKLTQQKSDFKLVYTPTEGEDKTVREAAFSVEKIALADAKTIYVAPDGKPTNKGSKASPLDISTAINALAAGGTLWLADGDYSATEIPVSASGHAKGYKNLYVSGKKAVIHGLKLNASYWNVKGIEITEKNFRIEGSHNRIERVLAHHCDDTGIQVASSDAVGKPLWASYNLILNSESHSNQDPGKINADGFAVKMRVGEGNVIRGAFSHDNIDDGFDLFNKIEDGPNGVVVIENSIALNNTSNGFKMGGEGQPVAHQVKNSIAIGNQLDGFTDNFNPGALAVSNNIALDNQRFNFIFRPSPYYGPEKQGIFKNNVSLRTKPGKYDDAVVGRIDASNYFIKNGHSVNSQGKEITVAAYKSVQVPQTFSRDAKGNLQLGDFLKKK  
  
>**gb|ACT06383.1| Parallel beta-helix repeat protein [Dickeya zeae Ech1591]**MKYLNCFISTGLAAFFLVNSTSVLAADCSSDLTSGISTKRIYYVAPNGSSSNNGNSFNSPMSFTAAMAAANPGELILLKPGTYTIPYTQGKGNTLTFNKSGKEGSPIYVAAANCGRAVFDFSFPDSQWVQASYGFYVTGDYWYFKGIEVTRAGYQGAYVTGSHNTFENTAFHHNRNTGLEINNGGSYNTVINSDAYRNYDPKKNGSMADGFGPKQKQGPGNRFVGCRAWENSDDGFDLFDSPQKVVIENSWAFRNGINYFNDSSFAGNGNGFKLGGNQAVGNHQITRSVAFGNVSKGFDQNNNAGGVTVVNNTSYKNGINYGFGSNVKSGQKHYFRNNVSLSGAATVNNADAKSNSWDTGPAASASDFVSLDTSLATISRDNDGTLPETALFRLSANSKLINAGTKESNISYSGSAPDLGAFERN  
  
>**gb|ACT07147.1| pectate lyase [Dickeya zeae Ech1591]**MNVNKKFLPAIIGCVLAGTAAQSLAAEYYLAPNGSDSANGSKSAPWKSFARAQQTLSPGDRLWVRGGTYTFTAGLNSCASQTDVVNAITLNKSGTSGNRIEYVAYTGEKPVFDFSQMKDDCRVKGFNVVADWVTVRGLEIKGVPQNNNKNHESWGVWIKGSNNRFEQLDIHHIMGTGLFLQNGAGNVVLNTDSHHNYDPLTSNGAGQSGDGFGAHIAANMPGNVFSGCRAWSNSDDGFDLINAYSAVTIENSWAWSHGYLPGTTTSLAAGNGNGFKAGGYGAKYVSNAPKHIVRNSVAFLNKAAGFYANHHPVANDFFNNTSFSNAVNYSMRGIDANGNAVALGTLRNNISFAAKSQSLTYTDGANMRYNSWNFSNALSNAEFQSVSTTGWDAARQADGSLPVLKHLRLASDSWMIDKGGDVKIAYKGAAPDLGAFELK  
  
>**gb|ACT08992.1| exopolygalacturonate lyase [Dickeya zeae Ech1591]**MKYAASGLLSVALNSLLLLGSNTAFAATQDVAPVWRGIAFGQSTDVNFATNVLPEKVGVNDVTINGKKLTVNDKADLSAPITIESRGGKIANTHDGLTFFYTQLPANVNFTLQSDVTVEQFGPESDAKPNAQEGAGLLVRDILGVPRQEPLKEGYEEFPAASNMVMNAIMTQDKKSKTEVKMQLISRDGVTQPWGNTNAEITRTSYQEKINLEQTPTFRLKLERTNDGFITAYAPKGSDQWVSKTVKGADLVTHQDKDHYYVGFFASRNAKITISNASLTTSPANTKPSAPFKAETTAPLLQVASSSLSTSDTYPVQARVNYNGTIEVFQNGKSLGKPQQIRAGDYFSLTAKLTQQKSDFKLVYIPGEGEDKTAKETSFSVEKITLADARNLYVSPEGKAGNNGSKNAPLDIKTAINALPGGGTVWLMDGDYSATVIPVSASGNAKGMKTLTPVGKKAVFHGLQLNASYWKVKGIEVTEKSFRIEGSHNQIERVLAHHCDNTGIQVSSSDNVGRPLWASHNLILNSESHSNQDPSKKDADGFAVKMRVGEGNVIRGAFSHDNVDDGFDLFNKIEDGPNGVVVIENSISRNNTSNGFKLGGEGQPVAHQVKNSIAIGNHMDGFSDNFNPGALQVSNNIALDNVRFNFIFRPSPYYGPEKQGMFKNNVSLRTQPGKYDDAVVGRVDASNYFIRNNRAVNSQGKEITTASYQSVAVPAVFSRDEKGNLQLGDFLQKK  
  
>**gb|ACZ76356.1| parallel beta-helix repeat protein [Dickeya dadantii Ech586]**MKYLNCFISTGLAAFFLVNSTSVLAADCSSDLTSGISTKRIYYVAPNGNGSNDGNSFNSPMSFSAAMAVVNPGELILLKPGTYTIPYTQGKGNTITFNKSGKEGSPIYVAAANCGRAVFDFSFPDSQWVQASYGFYVTGDYWYFKGVEVTRAGYQGAYVIGSHNTFENTAFHHNRNTGLEINNGGAYNTVINSDAYRNYDPKKNGSMADGFGPKQKQGPGNRFIGCRAWENSDDGFDLFDSPQKVVIENSWAFRNGVNYWNDSAFAGNGNGFKLGGNKAVGNHQITRSVAFGNVSKGFDQNNNAGGVTVVNNTSYKNGINYGFGSSVQSGQKHYFRNNISVAGSVTVSNADAKSNSWDTGPAASESDFVSLDTSLATVARDNDGTLPETSLFRLSANSKLINAGTKESNISYSGSAPDLGAFERN  
  
>**gb|ACZ77096.1| pectate lyase [Dickeya dadantii Ech586]**MNMNKKLLPIIMGCVLTGTAAQALAAEYYLAPNGSDSGNGGKSAPWKSFARAQQTLSPGDRLWVRGGTYTFTAGLNSCASQTDIVNAITLNKSGTSGKRIEYVAYTGETPVFDFSQMKDDCRVKGFNVVADWITLKGLEIKGVPQNNNKNHESWGVWIKGSNNRFEQLDIHHIMGTGLFLQNGANNTVLNSDSHHNYDPLTSNGAGQSGDGFGAHIAANMPGNIFSGCRAWSNSDDGFDLINAYSSVTIENSWAWSHGYLPGTTTSLAAGNGNGFKAGGYGAKYISNAPKHIVRNSVAFLNKAAGFYANHHPVANDFFNNTSYRNAVNFSMRGIDENGNAIALGTLRNNISYAAKSQSLAYTDGANMRYNSWNYSNVISDAEFQSVSTTGWDAPRQADGSLPVLKHLRLATDSWMIDKGGDVKIAYQGAAPDLGAFELK  
  
>**gb|ACZ78987.1| exopolygalacturonate lyase [Dickeya dadantii Ech586]**MKYATSGLLSVALNSLLLLGSHTAFATTQDAAPVWHSIAFGQSTDVNFATNVLPGKVGVNDVIINGKKLTVNDKASLASPVTIESRGGKIANTHDGLTFFYTQLPANVNFTLQSDVTVDQFGPENDAKPNAQEGAGLLVRDILGIPRQEPLKEGYEEFPAASNMVMNAIMTQDKKSKTDVKMQLISRDGVTQPWGNTNAEITRTSYQEKINLEQTPTFRLKLERTNDGFITSYAPKGSDQWVSKTIKGADLVTQQDKNHYYVGFFASRNAKITISNASLTTSPANTIPSAPFKAEATAPLLQVASSSLATGDNYPVQARVNYNGTIEVFQNGKSLGKPQHVRAGDYFSLTTRLTQPKSDFKLVYIPDEGEDKTAKDTSFSVEKITLADAKNLYVSPEGKAGNNGSKNAPLDIKTAITALPAGGTVWLMDGDYSATVIPVSASGNARGIKTLMPAGKKAVFHGLQLNASYWKVKGIEITEKSFRIEGSHNQIERVLAHHCDNTGIQVSSSDNVGRPLWASYNLILNSESHSNQDPSKKDADGFAIKMRVGEGNVIRGAFSHDNVDDGFDLFNKIEDGPNGAVLIENSISLNNTSNGFKLGGEGQPVAHQVKNSIAIGNHMDGFSDNFNPGALQVTNNIALDNVRFNFIFRPSPYYGPEKQGIFKNNISLRSHPGKYDDAVVGRVDASNYFIKNNHSLNSEGKEITTANYKSVAIPAVFSRDEKGNLQLGDFLKKK  
  
>**gb|ADM98300.1| Pectate lyase [Dickeya dadantii 3937]**MKVNKKFLPAIIGFVLAGTAAQSLAAEYYLAPNGSDSANGSKSAPWKSFARAQQTLSPGDRLWVRGGTYNFTAGLNSCASQTDIVNAITLNKSGTSGNRIEYVAYTGETPVFDFSQMKDDCRVKGFNVVASWVTLRGLEIKGVPQNNNKNHESWGVWINGSNNRFEQLNIHHIMGTGLFLKNGANNTVLNTDSHHNYDPLTSNGAGQSGDGFGAHIAANMPGNVFSGCRAWANSDDGFDLINAYSSVTIENSWAWSHGYLPGTTTSLPAGNGNGFKAGGYGAQYVSNAPKHVVRNSVAFLNKAAGFYANHHPVANDFFNNTSFKNTVNYSMRGIDASGNAIALGTLRNNISYAARSQSLAYTDGANMRYNSWNFSNAISDTEFQSVSTTGWDAARQADGSLPVLKHLRLASDSWMVDKGGDVKIAYKGAAPDLGAFELK  
  
>**gb|ADM99100.1| pectate lyase pelL [Dickeya dadantii 3937]**MKYLNCFISTGLAAFFLVNSTSVLAADCSSDLTSGISTKRIYYVAPNGNSSNNGSSFNAPMSFSAAMAAVNPGELILLKPGTYTIPYTQGKGNTITFNKSGKDGAPIYVAAANCGRAVFDFSFPDSQWVQASYGFYVTGDYWYFKGVEVTRAGYQGAYVIGSHNTFENTAFHHNRNTGLEINNGGSYNTVINSDAYRNYDPKKNGSMADGFGPKQKQGPGNRFVGCRAWENSDDGFDLFDSPQKVVIENSWAFRNGINYWNDSAFAGNGNGFKLGGNQAVGNHRITRSVAFGNVSKGFDQNNNAGGVTVINNTSYKNGINYGFGSNVQSGQKHYFRNNVSLSASVTVSNADAKSNSWDTGPAASASDFVSLDTSLATVSRDNDGTLPETSLFRLSANSKLINAGTKESNISYSGSAPDLGAFERN  
  
>**gb|ADN00761.1| exopolygalacturonate lyase PelX [Dickeya dadantii 3937]**MKYAASGLLSVALNSFLLLGSNTAFAATQDTAPVWHSIAFGQSTDVNFATNVLPDKVGVNDVTINGKKLTVNDKVDLSAPITIESRGGKIANTHDGLTFFYTQLPANVNFTLQSDVTVDQFGPESDAKPNAQEGAGLLVRDILGVPRQEPLKEGYEEFPAASNMVMNAIMTQDKKSKTDVKMQLISRDGVTQPWGNTNAQITRTSYQEKINLEQTPTFRLKLERTDDGFITSYAPKGSDQWVSKTVKGADLVTHQDKNHYYVGFFASRNAKITISNASLTTSPANTKPSAPFKAEVNAPLLQVASSPLSASDTYPVQARVNYNGTIEVFQNGKSLGKPQQIRAGDYFSLTAKLTQPKSDFKLVYVPGEGEDKTAKETSFSVEKIKLADAKNLYVSPEGKADNNGSKNAPLDIKTAINALQAGGTLRLMDGDYSATVIPVSASGNANGIKTLMPAGKKAIFHGLQLNASYWKVKGVEITEKSFRIEGSYNQIERVLAHHCDNTGIQVSSNDSVGRPLWASHNLILNSESHSNQDPSKKDADGFAIKMRVGEGNVIRGAFSHDNVDDGFDLFNKIEDGPNGVVVIGNSISVNNTSNGFKLGGEGQPVAHQVKNSIAIGNHMDGFSDNFNPGALQVTNNIALDNVRFNFIFRPSPYYGPEKQGIFKNNVSLRTQPGKYDDAVVGRVDASNYFIKNNRALNSQGKEITTANYKSVTVPAVFNRDEKGNLQLGDFLKKK

PL10

>**gb|ACT06296.1| pectate lyase [Dickeya zeae Ech1591]**MSYPHTRLSLLSLSLFAGLSAGLLASSPGYAAVAGCGQNCIDYLRENVQARPLTAASIATVSDATLRTQFTNYLATSASARSADKAALAAERKGMTTVPAPRGSGKNNLATMPLNQSGTYYQSAEALAIAQEIISFQIPSGGWGKNMSRTGVARTQGQSYIVDEIDPSESGSWRYVGTIDNGATTTELRYLAKVQAARTGSSETATLQASIVRGIKYLIAAQYPNGGWPQVYPLAGSYNDAITLNDDAMLRVVMLLNEIGNSSNSDFAFLDRNLRNSAAQAATKGTTWLVNNQVKVSGEWTIWGQQHDMLTQLPTAARAFEMAALSSAESAKITAFLMTLPNPDAKMRRAVYAAADFFTATRISGQSWSNGKLSSSPNGVLWARFYDLDAYTPSASSVAKRSQTLFGDRPDTHATSAYGLVFSSIASVSTERLTGYAQYNSSPQSVLTTFATWSKSNPRP

PL22

>**gb|ACS85845.1| Oligogalacturonide lyase [Dickeya dadantii Ech703]**MAKGKKLSFTFHTYQDSATGTEVVRLTPPDVICHRNYFYQKCFTSDGSKLLFGGAFDGPWNYYLLDLKTQQATQLTEGKGDNTFGGFLSPKDDALYYVKNVRNLMRVDLETLEEKTIYQVPDEWVGYGTWVANSDCTKMVGIEIKKEDWKPLTDWKKFQEFYFTNPCCRLIRIDLQTGEATTILQENQWLGHPIYRPGDDNTVAFCHEGPHDLVDARMWFINEDGSNMRKVKEHAPGESCTHEFWVPDGSALVYVSYLKGATNRFICSINPVTQENHQVAEMPPCSHLMSNHDGSLMVGDGCNAPVDVKDDGGYKIENDPFLYVFNMKTGRQHRVAQHNTSWEVLEGDRQVTHPHPSFTPDNKQILFTSDVDGKPALYLAKIPESVWQ  
  
>**gb|ACT06797.1| Oligogalacturonide lyase [Dickeya zeae Ech1591]**MAKGKKLSFTFHTYQDSVTGTEVVRLTPPDVICHRNYFYQKCFSNDGSKLLFGGAFDGPWNYYLLDLKTQQATQLTEGTGDNTFGGFLSPNDDALYYVKNVRNLMRVDLNTLEETNIYQVPDDWVGYGTWVANSDCTKMVGIEIKKEDWKPLTDWKKFQEFYFTNPCCRLIRIDLKTGEATTILQEKQWLGHPIYRPGDDNTVAFCHEGPHDLVDARMWFINEDGTNMRKVKEHALGESCTHEFWVPNGSALAYVSYLKGSTNRFICSVDPVTLENRQLTEMPPCSHLMSNYDGSLMVGDGCNAPVDVKDDGGYKIENDPFLYVFNMKTGKHFQVAQHNTSWEVLEGDRQVTHPHPSFTPDDKHILFTSDVDGKPALYLAKVPDSVWQ  
  
>**gb|ACZ76797.1| Oligogalacturonide lyase [Dickeya dadantii Ech586]**MAKGKKLSFTFHTYQDSVTGTEVVRLTPPDVICHRNYFYQKCFSNDGSKLLFGGAFDGPWNYYLLDLKTQQATQLTEGTGDNTFGGFLSPNDDALYYVKNVRNLMRVDLNTLEETNIYQVPDDWVGYGTWVANSDCTKMVGIEIKKEDWKPLTDWKKFQEFYFTNPCCRLIRIDLKTGEATTILQEKQWLGHPIYRPGDDNTVAFCHEGPHDLVDARMWFINEDGTNMRKVKEHAPGESCTHEFWVPNGSALAYVSYLKGSTNRFICSVDPVTLENRQLTEMPPCSHLMSNYDGTLMVGDGCNAPVDVKDDGGYKIENDPFLYVFNMKTGKHFQVAQHNTSWEVLEGDRQVTHPHPSFTPDDKHILFTSDVDGKPALYLAKVPDSVWH  
  
>**gb|ADM98639.1| Oligogalacturonate lyase [Dickeya dadantii 3937]**MAKGKKLSFSFHTYQDSVTGTEVVRLTPPDVICHRNYFYQKCFSNDGSKLLFGGAFDGPWNYYLLDLKTQQATQLTEGTGDNTFGGFLSPDDDALYYVKNVRNLMRVDLNTLEETNIYQVPDDWVGYGTWVANSDCTKMVGIEIKKEDWKPLTDWKKFQEFYFTNPCCRLIRIDLKTGEATTILKENQWLGHPIYRPGDDNTVAFCHEGPHDLVDARMWFINEDGSNMRKVKEHAPGESCTHEFWVPNGSALAYVSYLKGSTNRFICSVDPVTLENRQLTEMPPCSHLMSNYDGTLMVGDGCNAPVDVKDDGGYKIENDPFLYVFNMKTGKHFQVAQHNTSWEVLEGDRQVTHPHPSFTPDDKHILFTSDVDGKPALYLAKVPDSVWQ