# Molecular recognition and electron transfer in mitocho systems

Steroids

62, 124-127

DOI: 10.1016/s0039-128x(96)00170-5

Citation Report

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | New aspects of electron transfer revealed by the crystal structure of a truncated bovine adrenodoxin, Adx(4â€“108). Structure, 1998, 6, 269-280. | 1.6 | 167 |
| 2 | Direct electron transfer of adrenodoxinâ€”a [2Feâ€“2S] proteinâ€”and its mutants at modified gold electrode. Bioelectrochemistry, 1998, 47, 75-79. | 1.0 | 10 |
| 3 | Characterization of Recombinant Adrenodoxin Reductase Homologue (Arh1p) from Yeast. Journal of Biological Chemistry, 1998, 273, 23984-23992. | 1.6 | 48 |
| 4 | Optical biosensor studies on the productive complex formation between the components of cytochrome P450scc dependent monooxygenase system. IUBMB Life, 1999, 47, 327-336. | 1.5 | 6 |
| 5 | The concentration of adrenodoxin reductase limits cytochrome P450scc activity in the human placenta. FEBS Journal, 1999, 263, 319-325. | 0.2 | 32 |
| 6 | The Structure of Adrenodoxin Reductase of Mitochondrial P 450 Systems: Electron Transfer for Steroid Biosynthesis. Journal of Molecular Biology, 1999, 289, 981-990. | 2.0 | 129 |
| 7 | Vertebrate-type and plant-type ferredoxins: crystal structure comparison and electron transfer pathway modelling. Journal of Molecular Biology, 1999, 294, 501-513. | 2.0 | 44 |
| 8 | The role of adrenodoxin in adrenal steroidogenesis. Current Opinion in Endocrinology, Diabetes and Obesity, 2000, 7, 109-115. | 0.6 | 19 |
| 9 | Adrenodoxin: Structure, stability, and electron transfer properties. Proteins: Structure, Function and Bioinformatics, 2000, 40, 590-612. | 1.5 | 194 |
| 10 | Site-directed mutagenesis of cytochrome P450scc (CYP11A1). Effect of lysine residue substitution on its structural and functional properties. Biochemistry (Moscow), 2000, 65, 1409-1418. | 0.7 | 10 |
| 11 | Crystal Structure of Escherichia coli Fdx, an Adrenodoxin-Type Ferredoxin Involved in the Assembly of Ironâ^'Sulfur Clusters. Biochemistry, 2001, 40, 11007-11012. | 1.2 | 82 |
| 12 | Adrenodoxin Reductase-Adrenodoxin Complex Structure Suggests Electron Transfer Path in Steroid Biosynthesis. Journal of Biological Chemistry, 2001, 276, 2786-2789. | 1.6 | 152 |
| 13 | The Loop Region Covering the Iron-Sulfur Cluster in Bovine Adrenodoxin Comprises a New Interaction Site for Redox Partners. Journal of Biological Chemistry, 2001, 276, 1369-1375. | 1.6 | 37 |
| 14 | Revelation of ternary complexes between redox partners in cytochrome P450-containing monooxygenase systems by the optical biosensor method. Journal of Inorganic Biochemistry, 2001, 87, 175-184. | 1.5 | 25 |
| 15 | Covalently crosslinked complexes of bovine adrenodoxin with adrenodoxin reductase and cytochrome P450scc. FEBS Journal, 2001, 268, 1837-1843. | 0.2 | 30 |
| 16 | Oxidized adrenodoxin acts as a competitive inhibitor of cytochrome P450scc in mitochondria from the human placenta. FEBS Journal, 2001, 268, 2338-2343. | 0.2 | 18 |
| 17 | CYP11A1 stimulates the hydroxylase activity of CYP11B1 in mitochondria of recombinant yeastin vivoandin vitro. FEBS Journal, 2001, 268, 4054-4062. | 0.2 | 11 |
| 18 | Site-directed mutagenesis of cytochrome P450scc. II. Effect of replacement of the Arg425 and Arg426 residues on the structural and functional properties of the cytochrome P450scc. Biochemistry (Moscow), 2001, 66, 564-575. | 0.7 | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Adrenodoxin Reductase Homolog (Arh1p) of Yeast Mitochondria Required for Iron Homeostasis. Journal of Biological Chemistry, 2001, 276, 1503-1509. | 1.6 | 111 |
| 20 | Probing the Interaction of Bovine Cytochrome P450scc (CYP11A1) with Adrenodoxin:Â Evaluating Site-Directed Mutations by Molecular Modelingâ€. Biochemistry, 2002, 41, 8310-8320. | 1.2 | 64 |
| 21 | Unfolding and Conformational Studies on Bovine Adrenodoxin Probed by Engineered Intrinsic Tryptophan Fluorescenceâ€. Biochemistry, 2002, 41, 11008-11016. | 1.2 | 29 |
| 22 | Cellular surface display of dimeric Adx and whole cell P450-mediated steroid synthesis on E. coli. Journal of Biotechnology, 2002, 95, 257-268. | 1.9 | 74 |
| 23 | A New Electron Transport Mechanism in Mitochondrial Steroid Hydroxylase Systems Based on Structural Changes upon the Reduction of Adrenodoxinâ€. Biochemistry, 2002, 41, 7969-7978. | 1.2 | 56 |
| 24 | Placental cytochrome P450scc (CYP11A1): comparison of catalytic properties between conditions of limiting and saturating adrenodoxin reductase. Journal of Steroid Biochemistry and Molecular Biology, 2002, 81, 153-158. | 1.2 | 15 |
| 25 | Analyses of theCYP11Bgene family in the guinea pig suggest the existence of a primordialCYP11Bgene with aldosterone synthase activity. FEBS Journal, 2002, 269, 3838-3846. | 0.2 | 36 |
| 26 | Deletions in the loop surrounding the ironâ€“sulfur cluster of adrenodoxin severely affect the interactions with its native redox partners adrenodoxin reductase and cytochrome P450scc (CYP11A1). Journal of Inorganic Biochemistry, 2002, 91, 644-654. | 1.5 | 30 |
| 27 | Modeling of electrostatic recognition processes in the mammalian mitochondrial steroid hydroxylase system. Biophysical Chemistry, 2002, 100, 281-292. | 1.5 | 10 |
| 28 | Identification and molecular characterization of mitochondrial ferredoxins and ferredoxin reductase from Arabidopsis. Plant Molecular Biology, 2003, 52, 817-830. | 2.0 | 37 |
| 29 | Electrochemical behaviour of human adrenodoxin on a pyrolytic graphite electrode. Bioelectrochemistry, 2003, 59, 41-47. | 2.4 | 19 |
| 30 | Critical role of the plasma membrane for expression of mammalian mitochondrial side chain cleavage activity in yeast. FEBS Journal, 2003, 270, 1502-1514. | 0.2 | 15 |
| 31 | Crystal Structure of Putidaredoxin, the [2Feâ€“2S] Component of the P450cam Monooxygenase System from Pseudomonas putida. Journal of Molecular Biology, 2003, 333, 377-392. | 2.0 | 86 |
| 32 | Bacterial (CYP101) and mitochondrial P450 systemsâ€”how comparable are they?. Biochemical and Biophysical Research Communications, 2003, 312, 223-228. | 1.0 | 22 |
| 33 | Formation and Functioning of Fused Cholesterol Side-Chain Cleavage Enzymes. DNA and Cell Biology, 2003, 22, 243-252. | 0.9 | 12 |
| 34 | Redundancy or flexibility: molecular diversity of the electron transfer components for p450 monooxygenases in higher plants. Frontiers in Bioscience - Landmark, 2004, 9, 1587. | 3.0 | 14 |
| 35 | Overview of Dehydroepiandrosterone Biosynthesis. Seminars in Reproductive Medicine, 2004, 22, 281-288. | 0.5 | 70 |
| 36 | Overview of Steroidogenic Enzymes in the Pathway from Cholesterol to Active Steroid Hormones. Endocrine Reviews, 2004, 25, 947-970. | 8.9 | 1,383 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Stripping Down the Mitochondrial Cholesterol Hydroxylase System, a Kinetics Study. Journal of Biological Chemistry, 2004, 279, 34269-34276. | 1.6 | 34 |
| 38 | Computational, spectroscopic, and resonant mirror biosensor analysis of the interaction of adrenodoxin with native and tryptophan-modified NADPH-adrenodoxin reductase. Proteins: Structure, Function and Bioinformatics, 2004, 57, 302-310. | 1.5 | 2 |
| 39 | P450scc Mutant Nanostructuring for Optimal Assembly. IEEE Transactions on Nanobioscience, 2004, 3, 121-128. | 2.2 | 4 |
| 40 | Crystal Structure of Putidaredoxin Reductase from Pseudomonas putida, the Final Structural Component of the Cytochrome P450cam Monooxygenase. Journal of Molecular Biology, 2004, 336, 889-902. | 2.0 | 74 |
| 41 | From electron transfer to cholesterol transfer; molecular regulation of steroid synthesis in the mitochondrion. Topics in Current Genetics, 2004, , 293-330. | 0.7 | 1 |
| 42 | Progesterone synthesis by the human placenta. Placenta, 2005, 26, 273-281. | 0.7 | 249 |
| 43 | Site-directed mutations (Asp405Ile and Glu124Ile) in cytochrome P450scc: Effect on adrenodoxin binding. Journal of Cellular Biochemistry, 2005, 95, 720-730. | 1.2 | 1 |
| 44 | Molecular dynamics simulation of truncated bovine adrenodoxin. Biopolymers, 2005, 78, 9-20. | 1.2 | 5 |
| 45 | Role of Positively Charged Residues Lys267, Lys270, and Arg411 of Cytochrome P450scc (Cyp11A1) in Interaction with Adrenodoxin. Biochemistry (Moscow), 2005, 70, 664-671. | 0.7 | 8 |
| 47 | Phosphorylation of Bovine Adrenodoxin by Protein Kinase CK2 Affects the Interaction with Its Redox Partner Cytochrome P450scc(CYP11A1)â€. Biochemistry, 2005, 44, 3821-3830. | 1.2 | 24 |
| 48 | The interaction domain of the redox protein adrenodoxin is mandatory for binding of the electron acceptor CYP11A1, but is not required for binding of the electron donor adrenodoxin reductase. Biochemical and Biophysical Research Communications, 2005, 338, 491-498. | 1.0 | 14 |
| 49 | How Escherichia coli and Saccharomyces cerevisiae Build Fe/S Proteins. Advances in Microbial Physiology, 2005, 50, 41-101. | 1.0 | 94 |
| 50 | Electron Transfer Partners of Cytochrome P450. , 2005, , 115-148. | | 46 |
| 51 | The Fascinating World of Steroids:S. cerevisiaeas a Model Organism for the Study of Hydrocortisone Biosynthesis. Biotechnology and Genetic Engineering Reviews, 2006, 22, 213-252. | 2.4 | 9 |
| 53 | A new application of the yeast two-hybrid system in protein engineering. Protein Engineering, Design and Selection, 2007, 20, 117-123. | 1.0 | 14 |
| 56 | Protein Phosphorylation and Intermolecular Electron Transfer:Â A Joint Experimental and Computational Study of a Hormone Biosynthesis Pathway. Journal of the American Chemical Society, 2007, 129, 4206-4216. | 6.6 | 21 |
| 57 | Variations on a (t)hemeâ€"novel mechanisms, redox partners and catalytic functions in the cytochrome P450 superfamily. Natural Product Reports, 2007, 24, 585-609. | 5.2 | 256 |
| 59 | The endogenous adrenodoxin reductase-like flavoprotein arh1 supports heterologous cytochrome P450-dependent substrate conversions in Schizosaccharomyces pombe. FEMS Yeast Research, 2008, 8, 432-441. | 1.1 | 30 |

| # | Article | IF | Citations |
|---|---|---|---|
| 60 | From structure and functions of steroidogenic enzymes to new technologies of gene engineering. Biochemistry (Moscow), 2009, 74, 1482-1504. | 0.7 | 25 |
| 61 | The dipole moment of the electron carrier adrenodoxin is not critical for redox partner interaction and electron transfer. Journal of Inorganic Biochemistry, 2009, 103, 997-1004. | 1.5 | 14 |
| 62 | Construction and characteristics of transgenic tobacco Nicotiana tabacum L. plants expressing CYP11A1 cDNA encoding cytochrome P450SCC. Russian Journal of Genetics, 2009, 45, 1067-1073. | 0.2 | 13 |
| 63 | Mechanism of steroidogenic electron transport: Role of conserved Glu429 in destabilization of CYP11A1-Adrenodoxin complex. Biochemistry (Moscow), 2010, 75, 570-578. | 0.7 | 6 |
| 64 | Humans possess two mitochondrial ferredoxins, Fdx1 and Fdx2, with distinct roles in steroidogenesis, heme, and Fe/S cluster biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11775-11780. | 3.3 | 279 |
| 65 | The Molecular Biology, Biochemistry, and Physiology of Human Steroidogenesis and Its Disorders. Endocrine Reviews, 2011, 32, 81-151. | 8.9 | 1,743 |
| 66 | Functional Characterization of Fdx1: Evidence for an Evolutionary Relationship between P450-Type and ISC-Type Ferredoxins. Journal of Molecular Biology, 2011, 413, 940-951. | 2.0 | 20 |
| 68 | Early steps in steroidogenesis: intracellular cholesterol trafficking. Journal of Lipid Research, 2011, 52, 2111-2135. | 2.0 | 413 |
| 69 | Kinetic and optical biosensor study of adrenodoxin mutant AdxS112W displaying an enhanced interaction towards the cholesterol side chain cleavage enzyme (CYP11A1). European Biophysics Journal, 2011, 40, 1275-1282. | 1.2 | 7 |
| 70 | Structural and thermodynamic characterization of the adrenodoxin-like domain of the electron-transfer protein Etp1 from Schizosaccharomyces pombe. Journal of Inorganic Biochemistry, 2011, 105, 957-965. | 1.5 | 11 |
| 71 | Interactions of natural polyamines with mammalian proteins. Biomolecular Concepts, 2011, 2, 79-94. | 1.0 | 23 |
| 72 | Both human ferredoxins 1 and 2 and ferredoxin reductase are important for iron-sulfur cluster biogenesis. Biochimica Et Biophysica Acta - Molecular Cell Research, 2012, 1823, 484-492. | 1.9 | 133 |
| 73 | Human ferredoxin-2 displays a unique conformational change. Dalton Transactions, 2013, 42, 3088-3091. | 1.6 | 16 |
| 74 | Genome-wide association study of chronic hepatitis B virus infection reveals a novel candidate risk allele on 11q22.3. Journal of Medical Genetics, 2013, 50, 725-732. | 1.5 | 23 |
| 75 | Ferredoxin Competes with Bacterial Frataxin in Binding to the Desulfurase IscS*. Journal of Biological Chemistry, 2013, 288, 24777-24787. | 1.6 | 68 |
| 76 | Disorders in the Initial Steps in Steroidogenesis. , 2014, , 145-164. | | 4 |
| 77 | Adrenal Androgens and Androgen Precursorsâ€"Definition, Synthesis, Regulation and Physiologic Actions. , 2014, 4, 1369-1381. | | 80 |
| 78 | Transcriptional regulation of human ferredoxin reductase through an intronic enhancer in steroidogenic cells. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2014, 1839, 33-42. | 0.9 | 21 |

| # | Article | IF | Citations |
|---|---|---|---|
| 79 | Fifty Years of Cytochrome P450 Research. , 2014, , . | | 17 |
| 80 | Metalloproteins Containing Cytochrome, Ironâ€“Sulfur, or Copper Redox Centers. Chemical Reviews, 2014, 114, 4366-4469. | 23.0 | 672 |
| 81 | Mechanistic Basis of Electron Transfer to Cytochromes P450 by Natural Redox Partners and Artificial Donor Constructs. Advances in Experimental Medicine and Biology, 2015, 851, 247-297. | 0.8 | 24 |
| 82 | Monooxygenase, Peroxidase and Peroxygenase Properties and Mechanisms of Cytochrome P450. Advances in Experimental Medicine and Biology, 2015, , . | 0.8 | 29 |
| 83 | Identification of novel steroidogenic factor 1 (SF-1)-target genes and components of the SF-1 nuclear complex. Molecular and Cellular Endocrinology, 2015, 408, 133-137. | 1.6 | 7 |
| 84 | Mapping cellular Feâ€“S cluster uptake and exchange reactions â€“ divergent pathways for ironâ€“sulfur cluster delivery to human ferredoxins. Metallomics, 2016, 8, 1283-1293. | 1.0 | 27 |
| 85 | The Principles, Enzymes, and Pathways of Human Steroidogenesis. , 2016, , 1695-1716.e8. | | 1 |
| 86 | Disorders in the initial steps of steroid hormone synthesis. Journal of Steroid Biochemistry and Molecular Biology, 2017, 165, 18-37. | 1.2 | 148 |
| 87 | Effects of dietary soybean isoflavones (SI) on reproduction in the young breeder rooster. Animal Reproduction Science, 2017, 177, 124-131. | 0.5 | 13 |
| 88 | Molecular Recognition in Mitochondrial Cytochromes P450 That Catalyze the Terminal Steps of Corticosteroid Biosynthesis. Biochemistry, 2017, 56, 2282-2293. | 1.2 | 20 |
| 89 | Toxic effects of Tripterygium wilfordii Hook F on the reproductive system of adolescent male rats. Biomedicine and Pharmacotherapy, 2017, 95, 1338-1345. | 2.5 | 30 |
| 90 | Biallelic mutations in the ferredoxin reductase gene cause novel mitochondriopathy with optic atrophy. Human Molecular Genetics, 2017, 26, 4937-4950. | 1.4 | 32 |
| 91 | Î”6 fatty acid desaturases in polyunsaturated fatty acid biosynthesis: insights into the evolution, function with substrate specificities and biotechnological use. Applied Microbiology and Biotechnology, 2020, 104, 9947-9963. | 1.7 | 10 |
| 92 | Integrated analysis of the molecular pathogenesis of FDXR-associated disease. Cell Death and Disease, 2020, 11, 423. | 2.7 | 21 |
| 93 | Structural and functional insights into aldosterone synthase interaction with its redox partner protein adrenodoxin. Journal of Biological Chemistry, 2021, 296, 100794. | 1.6 | 18 |
| 94 | Steroidogenic Enzymes in Leydig Cells. , 2007, , 157-171. | | 19 |
| 95 | P450 Enzymes in Steroid Processing. , 2015, , 851-879. | | 23 |
| 96 | Mammalian and Bacterial Cytochromes P450 Cytochromes P450 Involved in Steroid Hydroxylation Steroid Hydroxylation : Regulation of Catalysis and Selectivity, and Potential Applications. , 2014, , 135-151. | | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 97 | Studies on Protein Electron Carrier Complexes Adrenodoxin Reductase - Adrenodoxin Complex in Steroid Biosynthesis. , 2002, , 251-264. | | 1 |
| 98 | The Principles, Enzymes, and Pathways of Human Steroidogenesis. , 2010, , 1784-1804. | | 4 |
| 99 | Covalently crosslinked complexes of bovine adrenodoxin with adrenodoxin reductase and cytochrome P450scc Mass spectrometry and Edman degradation of complexes of the steroidogenic hydroxylase system. FEBS Journal, 2001, 268, 1837-1843. | 0.2 | 5 |
| 100 | A mitochondrial ADXRâ€“ADXâ€“P450 electron transport chain is essential for maternal gametophytic control of embryogenesis in Arabidopsis. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, . | 3.3 | 6 |
| 101 | Ferredoxin reductase and p53 are necessary for lipid homeostasis and tumor suppression through the ABCA1â€“SREBP pathway. Oncogene, 2022, 41, 1718-1726. | 2.6 | 12 |
| 102 | Redox partner adrenodoxin alters cytochrome P450 11B1 ligand binding and inhibition. Journal of Inorganic Biochemistry, 2022, 235, 111934. | 1.5 | 6 |
| 103 | Disorders in the initial steps in steroidogenesis. , 2023, , 217-237. | | 0 |