

Elizabeth E Howell

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55
papers

1,142
citations

20
h-index

31
g-index

56
ext. papers

1,237
ext. citations

4
avg, IF

3.84
L-index

#	Paper	IF	Citations
55	A plasmid-encoded dihydrofolate reductase from trimethoprim-resistant bacteria has a novel D2-symmetric active site. <i>Nature Structural and Molecular Biology</i> , 1995 , 2, 1018-25	17.6	69
54	Construction of a synthetic gene for an R-plasmid-encoded dihydrofolate reductase and studies on the role of the N-terminus in the protein. <i>Biochemistry</i> , 1991 , 30, 10895-904	3.2	63
53	Toward resolving the catalytic mechanism of dihydrofolate reductase using neutron and ultrahigh-resolution X-ray crystallography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 18225-30	11.5	58
52	A preference for edgewise interactions between aromatic rings and carboxylate anions: the biological relevance of anion-quadrupole interactions. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 8242-9 ^{3,4}	3.4	55
51	A multilaboratory comparison of calibration accuracy and the performance of external references in analytical ultracentrifugation. <i>PLoS ONE</i> , 2015 , 10, e0126420	3.7	55
50	Unusual binding stoichiometries and cooperativity are observed during binary and ternary complex formation in the single active pore of R67 dihydrofolate reductase, a D2 symmetric protein. <i>Biochemistry</i> , 1996 , 35, 11414-24	3.2	54
49	Searching sequence space: two different approaches to dihydrofolate reductase catalysis. <i>ChemBioChem</i> , 2005 , 6, 590-600	3.8	44
48	Analysis of hydride transfer and cofactor fluorescence decay in mutants of dihydrofolate reductase: possible evidence for participation of enzyme molecular motions in catalysis. <i>Biochemistry</i> , 1991 , 30, 11567-79	3.2	44
47	Interligand Overhauser effects in type II dihydrofolate reductase. <i>Biochemistry</i> , 2001 , 40, 4242-52	3.2	39
46	Titration of histidine 62 in R67 dihydrofolate reductase is linked to a tetramertwo-dimer equilibrium. <i>Biochemistry</i> , 1993 , 32, 1695-706	3.2	37
45	A second-site mutation at phenylalanine-137 that increases catalytic efficiency in the mutant aspartate-27----serine Escherichia coli dihydrofolate reductase. <i>Biochemistry</i> , 1990 , 29, 8561-9	3.2	32
44	Crystal structure of a type II dihydrofolate reductase catalytic ternary complex. <i>Biochemistry</i> , 2007 , 46, 14878-88	3.2	29
43	Role of ionic interactions in ligand binding and catalysis of R67 dihydrofolate reductase. <i>Biochemistry</i> , 2003 , 42, 10569-78	3.2	28
42	Structure and function of alternative proton-relay mutants of dihydrofolate reductase. <i>Biochemistry</i> , 1992 , 31, 9813-22	3.2	24
41	Role of S65, Q67, I68, and Y69 residues in homotetrameric R67 dihydrofolate reductase. <i>Biochemistry</i> , 2001 , 40, 11344-52	3.2	23
40	How do mutations at phenylalanine-153 and isoleucine-155 partially suppress the effects of the aspartate-27-->serine mutation in Escherichia coli dihydrofolate reductase?. <i>Biochemistry</i> , 1993 , 32, 3479 ^{3,7}	3.7	22
39	Equilibrium folding studies of tetrameric R67 dihydrofolate reductase. <i>Biochemistry</i> , 1994 , 33, 4237-44	3.2	22

38	Modulating Enzyme Activity by Altering Protein Dynamics with Solvent. <i>Biochemistry</i> , 2018 , 57, 4263-4275	5.2	20
37	The tail wagging the dog: insights into catalysis in R67 dihydrofolate reductase. <i>Biochemistry</i> , 2010 , 49, 9078-88	3.2	20
36	Mechanistic studies of R67 dihydrofolate reductase. Effects of pH and an H62C mutation. <i>Journal of Biological Chemistry</i> , 1997 , 272, 2252-8	5.4	20
35	Tuning of the H-transfer coordinate in primitive versus well-evolved enzymes. <i>ChemPhysChem</i> , 2008 , 9, 980-2	3.2	20
34	Calorimetric studies of ligand binding in R67 dihydrofolate reductase. <i>Biochemistry</i> , 2005 , 44, 12420-33	3.2	20
33	NMR studies of the interaction of a type II dihydrofolate reductase with pyridine nucleotides reveal unexpected phosphatase and reductase activity. <i>Biochemistry</i> , 2003 , 42, 11150-60	3.2	20
32	Weak interactions between folate and osmolytes in solution. <i>Biochemistry</i> , 2012 , 51, 2309-18	3.2	19
31	Defining the binding site of homotetrameric R67 dihydrofolate reductase and correlating binding enthalpy with catalysis. <i>Biochemistry</i> , 2004 , 43, 7403-12	3.2	19
30	A balancing act between net uptake of water during dihydrofolate binding and net release of water upon NADPH binding in R67 dihydrofolate reductase. <i>Journal of Biological Chemistry</i> , 2008 , 283, 4690-8	5.4	18
29	One site fits both: a model for the ternary complex of folate + NADPH in R67 dihydrofolate reductase, a D2 symmetric enzyme. <i>Journal of Computer-Aided Molecular Design</i> , 2001 , 15, 1035-52	4.2	18
28	Breaking symmetry: mutations engineered into R67 dihydrofolate reductase, a D2 symmetric homotetramer possessing a single active site pore. <i>Biochemistry</i> , 2002 , 41, 15664-75	3.2	16
27	Thermodynamics and solvent effects on substrate and cofactor binding in Escherichia coli chromosomal dihydrofolate reductase. <i>Biochemistry</i> , 2011 , 50, 3673-85	3.2	15
26	Intact protein analysis for site-directed mutagenesis overexpression products: plasmid-encoded R67 dihydrofolate reductase. <i>Analytical Biochemistry</i> , 2002 , 305, 68-81	3.1	15
25	Thermodynamics and solvent linkage of macromolecule-ligand interactions. <i>Methods</i> , 2015 , 76, 51-60	4.6	14
24	Role of Lys-32 residues in R67 dihydrofolate reductase probed by asymmetric mutations. <i>Journal of Biological Chemistry</i> , 2004 , 279, 46995-7002	5.4	14
23	Effects of single-tryptophan mutations on R67 dihydrofolate reductase. <i>Biochemistry</i> , 2000 , 39, 3678-89	3.2	14
22	Investigation of osmolyte effects on FolM: comparison with other dihydrofolate reductases. <i>Biochemistry</i> , 2014 , 53, 1330-41	3.2	13
21	A Structural Basis for Biguanide Activity. <i>Biochemistry</i> , 2017 , 56, 4786-4798	3.2	13

20	Effects of temperature and viscosity on R67 dihydrofolate reductase catalysis. <i>Biochemistry</i> , 2006 , 45, 6596-605	3.2	13
19	Effects of high hydrostatic pressure or hydrophobic modification on thermal stability of xanthine oxidase. <i>Enzyme and Microbial Technology</i> , 2017 , 103, 18-24	3.8	12
18	Redesigning the quaternary structure of R67 dihydrofolate reductase. Creation of an active monomer from a tetrameric protein by quadruplication of the gene. <i>Journal of Biological Chemistry</i> , 1996 , 271, 28031-7	5.4	12
17	Glucose oxidase stabilization against thermal inactivation using high hydrostatic pressure and hydrophobic modification. <i>Biotechnology and Bioengineering</i> , 2017 , 114, 516-525	4.9	11
16	"Catch 222," the effects of symmetry on ligand binding and catalysis in R67 dihydrofolate reductase as determined by mutations at Tyr-69. <i>Journal of Biological Chemistry</i> , 2004 , 279, 47003-9	5.4	11
15	Vibrational structure of dihydrofolate bound to R67 dihydrofolate reductase. <i>Journal of Biological Chemistry</i> , 2001 , 276, 48956-60	5.4	11
14	Further studies on the role of water in R67 dihydrofolate reductase. <i>Biochemistry</i> , 2013 , 52, 2118-27	3.2	10
13	Highly Dynamic Anion-Quadrupole Networks in Proteins. <i>Biochemistry</i> , 2016 , 55, 6056-6069	3.2	9
12	The effect of electrostatic shielding on H tunneling in R67 dihydrofolate reductase. <i>ChemBioChem</i> , 2009 , 10, 2620-3	3.8	7
11	R67, the other dihydrofolate reductase: rational design of an alternate active site configuration. <i>Biochemistry</i> , 2008 , 47, 555-65	3.2	7
10	Tales of Dihydrofolate Binding to R67 Dihydrofolate Reductase. <i>Biochemistry</i> , 2016 , 55, 133-45	3.2	7
9	Aspects of Weak Interactions between Folate and Glycine Betaine. <i>Biochemistry</i> , 2016 , 55, 6282-6294	3.2	6
8	Radical redesign of a tandem array of four R67 dihydrofolate reductase genes yields a functional, folded protein possessing 45 substitutions. <i>Biochemistry</i> , 2010 , 49, 7384-92	3.2	6
7	Small Angle Neutron Scattering Studies of R67 Dihydrofolate Reductase, a Tetrameric Protein with Intrinsically Disordered N-Termini. <i>Biochemistry</i> , 2017 , 56, 5886-5899	3.2	4
6	Titration of Folate Pathway Enzymes. <i>Applied and Environmental Microbiology</i> , 2018 , 84,	4.8	3
5	The Structural Basis for Nonsteroidal Anti-Inflammatory Drug Inhibition of Human Dihydrofolate Reductase. <i>Journal of Medicinal Chemistry</i> , 2020 , 63, 8314-8324	8.3	3
4	Crowders Steal Dihydrofolate Reductase Ligands through Quinary Interactions. <i>Biochemistry</i> , 2019 , 58, 1198-1213	3.2	2
3	Catalytic activity and stabilization of phenyl-modified glucose oxidase at high hydrostatic pressure. <i>Enzyme and Microbial Technology</i> , 2020 , 137, 109538	3.8	2

- 2 Effects of Osmolytes on Ligand Binding to Dihydropteroate Synthase from. *Journal of Physical Chemistry B*, **2020**, 124, 6212-6224 3.4 ○
- 1 Differentiation of the binding of two ligands to a tetrameric protein with a single symmetric active site by F NMR. *Protein Science*, **2021**, 30, 477-484 6.3 ○