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Supporting information for article:

Knowledge-based prediction of DNA hydration using hydrated dinucleotides as building blocks

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Table S1. List of PDB codes of structures used in the study.

Uncomplexed DNA, listed as pdbID_chain:

3p4j_A, 1i0t_A, 1d8g_A, 4ocb_A, 4hig_A, 5jqz_A, 1dpl_A, 1ick_A, 4hif_A, 3ggk_A, 1enn_A, 4mj9_A,
4x1a_A, 1sk5_A, 1em0_A, 293d_A, 2elg_A, 352d_A, 4r15_A, 2dcb_A, 4e1u_A, 6niz_A, 1dnp_A, 3omj_A,
1i0m_A, 4qio_A, 1i0k_A, 1kgk_A, 3gg1_A, 3u89_A, 4x18_A, 4iii_A, 6gld_B, 5jeu_A, 292d_A, 1dcb_A,
1dj6_A, 131d_A, 5xjz_A, 1qyl_A, 1d48_A, 6aqt_A, 336d_A, 3wbo_A, 5zat_A, 3i5e_A, 1en3_A, 1en8_A,
1ene_A, 1en9_A, 5jev_A, 436d_A, 4i9v_A, 5gsk_A, 5wsq_A, 6mc2_A, 1fd5_A, 1d11_A, 1n1o_A, 460d_A,
2fih_A, 4l25_A, 1mf5_A, 367d_A, 284d_A, 2oli_A, 1m69_A, 1fq2_A, 1jgr_A, 3opi_A, 3nz7_A, 440d_A,
427d_A, 1vro_A, 2f8w_A, 1d39_A, 2obz_A, 1r68_A, 3ft6_A, 6m2p_A, 4mkw_A, 2dyw_A, 431d_A, 4jd8_A,
244d_A, 145d_B, 1o0k_A, 3f16_A, 3f16_B, 3nyp_A, 3i5l_A, 1d35_A, 4fp6_A, 1d8x_A, 3ltr_A, 4f4n_A,
3u2n_A, 3ifi_A, 4agz_A, 6cq3_A, 454d_A, 4ah0_A, 2fii_A, 3u08_A, 3u05_A, 3ey3_A, 4c64_A, 3u0u_A,
4c63_A, 4c5x_A, 476d_A, 4u8b_A, 4u8c_A, 5lit_A, 145d_D, 362d_A, 4i1g_A, 145d_A, 4r49_A, 1m77_A,
6dy5_A, 3iki_A, 1z7i_A, 4r4d_A, 232d_A, 1vty_A, 1d61_A, 1dn5_A, 4fs5_A, 4fs6_A, 1omk_A, 6aqw_A,
6aqv_A, 1dc0_A, 1d40_A, 1d76_A, 1d41_A, 3ltu_A, 3dnb_A, 3hg8_A, 1p20_A, 2d34_A, 1zfl1_A, 210d_A,
355d_A, 455d_A, 1ei4_A, 4l26_A, 463d_A, 4gju_A, 5w20_A, 4ah1_A, 403d_A, 2b3e_A, 6jje_A, 1zfb_A,
1zf9_A, 5et2_A, 5ix7_A, 245d_A, 1ims_A, 151d_A, 152d_A, 2plo_A, 224d_A, 1d54_A, 6jkn_A, 6ip3_A,
1qyk_A, 4qkk_A, 1ue2_A, 2hc7_A, 1k9g_A, 308d_A, 1d79_A, 1d36_A, 2nsk_A, 2des_A, 1d78_A, 6n4g_A,
5dnb_A, 461d_A, 2dpb_A, 4f3u_A, 6jv5_A, 5mvl_A, 5wv7_A, 4h5a_A, 6gim_A, 1ih6_A, 5wsp_A, 5wsr_A,
5wss_A, 4xsn_A, 2hto_B, 1d33_A, 6s7d_A, 417d_A, 6a85_A, 1m6r_A, 2hto_A, 5xk0_A, 344d_A, 6jjf_A,
388d_A, 1s2r_A, 2dpc_A, 389d_A, 2dp7_A, 1g8n_A, 4r4a_A, 5dsb_A, 1d10_A, 1d23_A, 2avh_A, 482d_A,
385d_A, 295d_A, 1d15_A, 1z3f_A, 116b_A, 2b2b_A, 1zf0_A, 441d_A, 2gw0_A, 1puy_A, 1lpr_A, 1ikk_A,
1dcr_A, 1d9r_A, 1d49_A, 2o4f_A, 1zf6_A, 5xkl_A, 1cw9_A, 473d_A, 5mvq_A, 5mvk_A, 4p1d_A, 1jppq_A,
2hbn_A, 6ip7_A, 6m4t_A, 5wlz_A, 1zfa_A, 5zas_A, 4f2x_B, 6mc3_A, 2qef_A, 1d67_A, 6dwt_A, 1sgs_A,
1ub8_A, 1v3o_A, 1uhy_A, 1r3z_A, 160d_A, 181d_B, 137d_A, 1s23_A, 3bse_A, 3bse_B, 1j8l_A, 5dsa_A,
1z4_A, 4e2z_A, 213d_A, 370d_A, 1xjx_A, 423d_A, 2dz7_A, 1ue4_A, 2plb_A, 2pl8_A, 368d_A, 1dnz_A,
3pa0_A, 340d_A, 115d_A, 313d_A, 6n65_A, 3gsk_A, 306d_A, 1p4y_A, 5mvp_A, 351d_B, 4dwy_B, 3qxr_A,
1ilp_B, 1ilp_A, 118d_A, 1ljx_A, 400d_A, 6dxj_A, 5iyg_A, 5ezf_A, 5ezf_B, 383d_A, 6m5j_B, 6m5j_A,
4ys5_A, 1zfb_A, 4fxm_A, 6g8s_B, 2a7e_S, 1nr8_A, 4e7y_A, 5ip8_B, 5dev_A, 5fhj_A, 5ewb_B, 5iyj_A,
5ewb_A, 5iye_A, 5cdb_A, 2d94_A, 6s15_A, 396d_A, 278d_A, 348d_A, 1xjx_B, 1d12_A, 1d90_A, 1d56_A,
196d_A, 1nnv_A, 4gre_A, 3tok_B, 4gre_B, 1zey_A, 1zfg_A, 111h_A, 3hr3_A, 3iff_A, 1jtl_A, 1v3n_A,
9dna_A, 341d_A, 3lpv_A, 3lpv_B, 6rnl_A, 5ls8_A, 4r47_A, 3eum_A, 4zkk_A, 6jr4_A, 1d3r_B,
6qt2_A, 312d_B, 334d_A, 6qt1_A, 1d3r_A, 159d_A, 138d_A, 6qjo_A, 184d_A, 6wck_A, 4wo2_A, 1zf3_A,
200d_A, 307d_A, 307d_B, 241d_A, 1vt8_A, 3pbx_A, 4e95_A, 158d_A, 4ymc_A, 5ua3_A, 3uyh_A, 5ccw_A,
1f6e_A, 317d_A, 4r45_A, 243d_A, 1ih4_A, 2b1b_A, 2b1b_B, 3igt_C, 110d_A, 414d_A, 327d_A, 3igt_A,
3igt_B, 399d_A, 260d_A, 254d_A, 1p54_A, 395d_A, 304d_A, 369d_A, 192d_A, 3n4n_E, 3n4n_D, 4f8i_A,
5dam_A, 4z4b_A, 4xno_A, 4h29_A, 1sm5_B, 1xjy_A, 275d_A, 1zfc_A, 1jrn_A, 1da3_A, 189d_A, 3eru_A,
238d_A, 2gwq_A, 380d_A, 5ju4_A, 5jvw_A, 2d95_A, 1dcw_A, 1sm5_A, 1uhx_A, 1d57_A, 2d47_A, 1p1y_X,
4izq_A, 3e9w_A, 3e9w_B, 239d_A, 208d_A, 2hri_A, 1d91_A, 1hq7_A, 4ocd_A, 4rip_A, 43d_A, 1d16_A,
1zje_A, 1zje_B, 1d26_A, 1d93_A, 384d_A, 1rsb_A, 5ana_A, 287d_A, 253d_A, 119d_A, 3cco_A, 2b1c_A,
458d_B, 458d_A, 188d_A, 1ilc_A, 3eqw_A, 1zjy_A, 3eui_A, 1zew_A, 257d_A, 1d92_A, 111d_A, 6mc4_A,
249d_A, 252d_A, 1lp7_B, 1lp7_A, 195d_A, 1d89_B, 1d89_A, 281d_A, 2avj_A, 3qsf_X, 1lqu_A,
282d_A, 1k8p_A, 378d_A, 3ce5_A, 3qsc_X, 358d_A, 237d_A, 1dvl_A, 1lu5_A, 6wk7_B, 206d_A, 294d_A,
1qph_A, 311q_A, 1n4e_B, 1pnn_B, 1n4e_A, 116d_A, 1vt7_A, 1d98_B, 1vt9_A, 2b1d_A, 1zfh_A, 3ey0_A,
117d_A, 1qp5_A, 1qp5_B, 1d31_A, 309d_A

Protein-DNA complexes, listed as pdbID_chain:

4m9v_A, 4m9v_B, 4gzn_B, 6ukf_B, 6ukf_A, 1pfe_A, 3go3_A, 6ukg_A, 6ukg_B, 4lup_B, 6kbx_A, 6dp8_C,
6dpi_C, 6dph_C, 1k3x_B, 1k3x_C, 6dog_C, 6dob_C, 6dpc_C, 6dop_C, 1xvk_A, 6do9_C, 6doh_C,
6dos_C, 2hax_C, 2vla_L, 2vla_M, 3ndh_C, 3ndh_D, 5exh_A, 3sjm_C, 3sjm_D, 4uqm_B, 4uqm_C, 4nih_C,
4nih_B, 5cl8_C, 5cl8_B, 4xzf_B, 1xvr_A, 1mn_B, 1mn_C, 2ea0_B, 2ea0_C, 5dlo_B, 3fde_E, 3fde_C,
4x9j_C, 4x9j_B, 1k3w_B, 4ecv_T, 5kfc_P, 5kfc_T, 5kfc_Z, 5kfc_P, 3jxy_B, 3jxy_C, 5cl7_C, 5cl7_B,
5mct_C, 5kl3_B, 5kl3_C, 3eyi_C, 5kfb_P, 4b2l_Y, 5kfs_T, 4ecq_T, 5kfg_T, 5kg6_P, 5kg6_C,
5hf7_C, 5hf7_D, 4ed8_T, 5kg6_P, 1c8c_B, 1xyi_B, 5kfg_P, 5kfu_P, 2nq9_B, 5kfx_P, 5kfc_T, 4ecv_P,
5kfo_P, 5kfq_P, 6u17_D, 6u17_C, 4z47_D, 6bd0_B, 6bd0_C, 5kfa_T, 5kfn_P, 5kfx_T, 4b2l_X, 5kfb_T,
5kfe_T, 2odi_D, 2odi_C, 2nq9_D, 4ed8_P, 5kfa_P, 5kfs_P, 3zdb_X, 4nig_B, 3oit_C, 4nid_B, 4hly_C,
3oit_B, 6ml6_E, 6ml4_F, 6ml4_E, 4htu_C, 6od3_W, 3gox_C, 3gox_D, 2oaa_D, 2oaa_C, 5swm_D, 5vzc_T,
1sx5_C, 6lqf_B, 1azp_B, 5dwa_C, 1bf4_C, 5inl_C, 4gz1_C, 5kg2_P, 6dsw_P, 6p1n_T, 5kg4_P, 4wgc_C,
6q6r_A, 1egw_E, 1egw_F, 1llm_A, 1wto_B, 1dfm_C, 1qum_B, 2adw_A, 1dp7_D, 4lzt_T, 6bdb_B, 6bdb_C,
5vza_T, 1wtv_B, 1xvn_A, 1bf4_B, 4s0n_E, 3o1p_C, 3o1p_B, 3pv8_C, 3pv8_B, 6j0h_A, 5tkz_C, 2r1j_B,
2r1j_A, 3jx7_C, 3jx7_B, 5cl6_B, 5cl6_C, 5uuf_B, 5uuf_C, 3i8d_B, 3ey1_B, 4opk_B, 4bwj_C, 1a1i_B,
4r2a_B, 4r2a_C, 4r2q_B, 1aay_C, 6fbc_C, 6fbc_B, 6ml6_F, 4r2q_C, 4hug_C, 4opj_B, 5hnf_L, 5hnf_M,
4q8e_T, 4q8e_P, 6p0c_B, 2xhi_B, 3gpu_C, 4ofa_C, 4ofa_D, 4bwj_B, 2xhi_C, 6p0c_D, 6p0c_C, 6gce_C,
6gce_D, 5yty_A, 1qum_C, 1qum_D, 5yzt_A, 6gcf_D, 6gcf_C, 2evf_B, 2evf_C, 2evg_B, 2evg_C, 3ti0_B,
5z7i_D, 5yiw_E, 3thv_B, 6b00_B, 6b00_C, 6jip_B, 5hk3_C, 5odl_D, 2euz_B, 2euz_C, 4hue_C, 4dfk_B,
4c8m_B, 4c8m_C, 5uuh_C, 5uuh_B, 5dff_P, 4z3c_A, 4ez9_B, 3thv_C, 3ti0_C, 4f4k_B, 4dse_C, 4ez6_B,
4ez6_C, 4f4k_C, 4ez9_C, 4f3o_B, 3px4_C, 5dff_V, 5dff_D, 4f3o_C, 2etw_B, 2etw_C, 2etw_X, 2etw_Y,
6ryd_C, 6ryd_D, 5kl7_B, 4tqr_T, 4tqr_P, 4dsf_C, 2g8i_C, 2g8f_C, 6kij_A, 4ix7_C, 6dsw_T, 6fbc_B,
6fbc_C, 5mf7_C, 5dfi_P, 6bow_P, 3pvi_C, 5dfi_V, 6bow_V, 6we9_B, 5ciy_C, 5ciy_D, 6e94_C, 6e94_D,
6nua_C, 6nuh_C, 6o19_C, 6o19_B, 2fmp_T, 2fmp_P, 4kli_P, 4kli_D, 3gq4_B, 3gq4_C, 2axy_E,
5o63_C, 3bs1_B, 3bs1_C, 4pcz_B, 4pcz_C, 5wo0_P, 2py5_D, 3s57_B, 3s57_C, 1t9i_C, 1t9i_D, 5o63_D,
6f11_B, 1f1u_I, 4hc9_Y, 4hc9_Z, 5mcv_C, 1eon_C, 4xrm_M, 4xrm_L, 4pd2_C, 2zkd_C, 2zkd_D, 6mh_B,
6mh_G, 2p2r_B, 1eon_D, 1a1i_C, 1a1i_B, 1kj2_B, 6f11_C, 6a8r_E, 6a8r_F, 6a8r_G, 6a8r_H, 6a8r_I, 6a8r_J,
3u6p_B, 3u6p_C, 2g8k_C, 1auld_C, 1ahl_B, 5z7i_E, 6kbs_D, 3kxt_B, 3g9m_D, 3g9m_C, 2ih2_B, 2ih2_C,
6e18_B, 6e18_C, 6ipg_T, 3jr5_B, 111z_B, 3gpu_B, 4o3r_P, 6mu4_P, 3g9o_C, 3g9o_D, 1r2z_B, 1r2z_C,
4hik_B, 4f8r_C, 4f8r_B, 4n5s_C, 3py8_B, 5nkl_C, 4dfc_C, 5iij_P, 3d2w_B, 6cvq_E, 6e06_D, 4lzl_D,
3sau_C, 3sau_B, 2bcr_T, 5zkb_C, 6h05_B, 2bcq_T, 1jk2_C, 4pd2_B, 6ogk_C, 4kg4_B, 3a6e_C, 3a6e_D,
3m4a_E, 2itl_W, 2itl_C, 6kbz_A, 6dfb_D, 6dfb_E, 113l_E, 4dqs_C, 6iod_C, 4n5s_B, 4a75_B, 5td5_C,
6j1q_B, 3jxb_B, 3jxb_A, 5hnd_E, 4xpc_B, 6is8_C, 6is8_D, 2euw_B, 2euw_C, 6ml3_E, 6ml3_F, 6p0d_C,
6b1r_B, 6b1r_G, 4huf_C, 5zmo_B, 5kl2_B, 6is4_W, 3gq4_C, 3gpx_C, 4kbl_C, 3igl_B, 2ac0_E, 4oln_E,
4oln_F, 5wyt_C, 5v1g_P, 6bek_B, 3po4_C, 3s5a_C, 3s5a_B, 3rkq_C, 3rkq_D, 3po4_B, 5vhv_C, 5vhv_D,

1jx4_P, 5hrb_D, 1orn_C, 4c8l_C, 2gb7_F, 2gb7_E, 2theo_B, 2c7p_C, 111t_C, 1dsz_C, 1dsz_D, 3jr5_C, 111z_C, 5mcy_C, 5b2o_C, 5b2o_D, 4hio_B, 5b2p_C, 5vbs_B, 5vbs_G, 3igk_B, 4ibw_B, 4hj7_B, 4kmf_B, 5d9i_X, 2wbs_F, 2wbs_G, 2voa_C, 3py8_B, 6p0d_B, 1wtq_B, 5e41_B, 5d9i_Y, 2z70_B, 1h6f_C, 2c7p_D, 1jx4_T, 4him_B, 2bop_B, 1rh6_C, 1rh6_D, 1dc1_C, 1d2i_C, 1i3w_A, 1d02_C, 4bwm_B, 3rrh_B, 5b2q_D, 6m1k_G, 3fsi_U, 5u2t_P, 5vs3_T, 6cr4_P, 6btf_P, 5vs3_P, 5ff8_D, 5o7t_B, 3u6s_B, 2ih5_B, 2ibt_C, 2ibt_B, 1z54_U, 1z54_T, 4ibu_U, 5b2p_D, 4ibv_T, 6kcc_A, 5v1o_P, 4klg_P, 6cr4_T, 4klg_T, 6fbc_B, 6fbg_C, 6e33_C, 6e33_B, 5hru_C, 5uug_C, 3mr5_P, 4ed7_P, 6m7p_P, 4o3s_P, 5iij_T, 5d8k_A, 5clc_C, 5clc_B, 3nci_T, 3nci_P, 3qep_T, 3qep_P, 3qex_T, 4j2d_P, 3sq1_P, 4j2a_P, 3qev_P, 3qex_P, 3i0w_C, 1xjv_B, 3i0w_B, 3g00_I, 2c62_C, 5yuc_C, 5yub_C, 3kde_A, 3kde_B, 3g00_H, 5kkq_B, 5kkq_C, 4klo_P, 4klm_T, 4klj_P, 5u2r_P, 4klm_P, 4ydl_T, 5iii_P, 3fdq_C, 3fdq_D, 1ztt_B, 4c8o_C, 3jxz_B, 3jxz_C, 2vbl_T, 5hre_B, 6d0z_P, 2bcr_P, 3mr3_T, 4y60_A, 4y60_B, 3oqg_C, 3oqg_D, 6d0m_T, 3mr3_P, 2o4a_B, 2o4a_C, 6m7p_T, 6d0z_T, 6bce_B, 6bce_C, 6p0d_D, 4r63_T, 5zyu_C, 3jy1_C, 5clb_C, 3qev_T, 3si6_T, 4j2d_T, 3mfi_P, 3mfi_T, 1su2_C, 5f8a_C, 5wx9_B, 5wx9_C, 5clb_B, 3h8r_B, 3h8r_C, 4i2o_W, 4i2o_X, 1zzi_C, 3vke_R, 3u6s_C, 5yuz_B, 6jum_B, 2es2_B, 111t_B, 3gq3_B, 4g4n_B, 3gpy_B, 6rar_D, 6rar_B, 6rar_C, 6ctq_T, 4klf_T, 4klj_T, 6p0e_D, 4e9f_C, 6ctr_T, 5u9h_T, 4kl1_T, 5dgb_P, 6nkv_T, 4klo_T, 6lff_C, 4l1r_C, 3q23_C, 2fjx_B, 4lb6_C, 6asd_A, 4elv_C, 3mr5_T, 6ccg_C, 3qno_T, 4dtj_T, 4j2a_T, 5iii_T, 4qwb_B, 4qwb_C, 3bam_C, 3bam_E, 1lmb_1, 1lmb_2, 2bdp_T, 4bdp_P, 6b1q_G, 2wiw_C, 3rrh_C, 4dlg_C, 3t3f_C, 5o7t_C, 4dih_D, 1a73_C, 1a73_D, 1g9z_F, 4zsf_B, 1u1r_B, 1ssp_B, 1j75_B, 4jcy_C, 4jcy_D, 4g92_D, 4g92_E, 5w9q_C, 3v9z_C, 4tup_T, 4r63_P, 4elu_C, 1g9z_C, 1g9z_D, 1g9z_E, 4bdp_T, 1u1q_B, 2vbn_C, 2vbl_C, 2vbl_S, 2vbo_C, 2vbo_E, 1q3f_C, 1ssp_A, 2bdp_P, 2fjx_G, 1vto_C, 1vto_D, 1qna_C, 1qna_D, 3i0x_C, 1m5r_C, 1m5r_E, 3d0p_B, 1w0u_C, 1w0u_D, 1u1p_B, 1q3f_B, 3kjp_B, 1sxq_E, 1sxq_C, 1wtr_B, 1tez_I, 1tez_J, 1nkp_F, 1emh_B, 6s48_C, 1gtw_D, 1gu4_D, 2e42_D, 2e42_C, 1wtp_C, 5mwv_C, 5e41_C, 3ojs_C, 4r55_B, 6gcd_C, 6gcd_D, 6w0q_V, 5dfj_P, 6bor_P, 5b0r_P, 6gj_C, 5szt_C, 6fbh_B, 6fbh_C, 5hrd_E, 3u6c_C, 1ytb_C, 2evi_B, 2evi_C, 6bor_V, 6wea_E, 2ih5_C, 2dp6_C, 2dp6_D, 1c18_B, 3d0a_E, 1ztt_G, 5deu_B, 5deu_C, 5kn8_C, 5kn8_D, 3q24_C, 6d92_G, 6d92_J, 6lrd_C, 5bua_B, 6j80_C, 6b0r_C, 6b0r_D, 6df5_D, 6dfa_E, 6df5_E, 3sq1_T, 5l1k_P, 4hid_B, 4o6a_C, 5xgz_F, 5xgz_E, 3gq3_C, 5yv2_C, 5yv2_B, 5yuu_H, 2gig_E, 5chz_C, 3mr2_P, 5yuz_C, 6d0m_P, 6blw_B, 6blw_C, 3qew_T, 3s16_P, 3qno_P, 3ngi_P, 4dtj_P, 3qew_P, 4m3z_P, 3ngi_T, 4dtu_T, 4m3z_T, 4dtx_T, 4m3y_P, 4fj1_P, 4dtu_P, 4dtp_C, 6clt_B, 6p0e_B, 5tbc_P, 4f5p_P, 3ogu_P, 3ogu_T, 5inp_C, 5inp_C, 4dwi_B, 2ofi_B, 2ofc_C, 3v6t_G, 3v6t_H, 4rdu_B, 2ahi_E, 5wm1_P, 5wm1_P, 4gjr_G, 4gjr_H, 1zbi_D, 4gz2_C, 4hj9_B, 4j9l_T, 4aik_D, 2w7n_E, 2w7n_F, 2c7q_C, 2c7q_D, 6p0e_C, 6q1v_C, 6dfa_D, 6iiq_D, 6d95_C, 5trd_G, 6q1v_D, 5vlh_P, 5e69_C, 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1r2y_C, 4jv1_B, 4fly_T, 1oup_E, 4l18_C, 3wtt_E, 2wq6_C, 4egz_T, 4egz_U, 4z59_B, 4wu4_H, 4b24_Y,
1f6o_E, 3c0x_D, 1cw0_O, 3po5_C, 4fly_P, 3mxa_C, 3mxa_D, 3mxa_E, 3mxa_F, 5yvw_C, 3px7_C, 1rrj_B,
1qtm_C, 1qsy_C, 1qss_C, 1rio_U, 1rio_T, 1lq1_E, 1lq1_F, 2hof_C, 1le8_C, 1le8_D, 1ph8_D, 1ph5_D,
1ph4_D, 1ph3_D, 1ph4_G, 1t3n_T, 1s97_E, 1skr_T, 1tk0_T, 1cw0_M, 1a6y_C, 1a6y_D, 1f6o_D, 1am9_E,
1am9_F, 1au7_D, 1au7_C, 2i3p_D, 2i3p_C, 1bl0_C, 1bl0_B, 1nfk_C, 1ma7_D, 3wvp_M, 5zfy_E, 5zfy_D,
5zva_C, 1du1_B, 4ir9_H, 6ir8_B, 6ir8_C, 3ktq_C, 2ktq_D, 5tgx_I, 5e0l_C, 5x2g_C, 5x2g_D, 5x2h_C,
5x2h_D, 1xsl_B, 2nr18_W, 2h7h_X, 2h7h_Y, 1ph3_G, 2i3q_C, 2i3q_D, 2owo_B, 1zet_T, 1z65_C, 1z61_C,
1z61_D, 1zzj_D, 1qaj_C, 2geq_C, 2h27_B, 2h27_C, 1qai_C, 1ph8_G, 4j3n_C, 1a1l_C, 4egy_T, 4egy_U,
5z6z_D, 5z6z_E, 5cm3_C, 3g9j_C, 6kdm_E, 6kdn_E, 4f4z_C, 6qtk_E, 2pi0_E, 2pi0_F, 2a4_T, 4eey_T,
5th3_I, 5th3_H, 5th3_j, 5th3_k, 4f4y_C, 4cn7_C, 4cn7_D, 6u81_C, 6pbd_X, 6pbd_Y, 4iem_F, 3gij_D,
3b39_C, 4cn3_E, 4cn3_F, 4xr1_B, 4xr1_C, 4dwp_C, 4dwp_D, 5t7x_D, 5t7x_C, 1b72_D, 1b72_E, 1pvp_C,
1pvp_D, 1mwi_D, 1f2i_A, 6go5_H, 6bse_C, 4kyw_C, 3szq_C, 4f43_C, 4lez_E, 1b8i_C, 1b8i_D, 5hhh_P,
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4osk_H, 4q0z_C, 4q0z_D, 5bs8_E, 5bs8_F, 3h0d_C, 3h0d_D, 3vyb_C, 2gws_G, 4tmu_B, 1ozj_D, 3hxo_B,
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1ku7_C, 1trr_C, 1hcq_D, 6s6h_C, 1ga5_D, 1cez_T, 1cez_N, 1d3u_C, 1d3u_D, 1crx_E, 3vah_E, 1ga5_C,
1jmc_B, 5zjt_D, 5zjq_C, 5zjt_C, 5xuz_C, 6k2j_E, 6k2j_F, 4nca_G, 4ux5_C, 1sxp_C, 1sxp_D, 2ezv_F,
2qhb_D, 2ntc_W, 2ntc_C, 1s97_I, 2gws_F, 2hof_D, 3mip_D, 3qqy_B, 4h10_C, 4h10_D, 2isz_E, 3m9e_C,
3bjy_T, 1ihf_E, 6wya_C, 6wya_B, 3vwb_B, 5v3g_B, 6fqp_L, 5fd3_C, 5fd3_D, 5j2m_P, 5j2p_T, 5j2m_T,
5zjq_D, 6kqf_G, 3tq6_C, 3tq6_D, 6fb8_D, 5cdp_G, 5h9f_N, 4gct_W, 2nqj_C, 2nqj_D, 5cdp_E, 2bnw_E,
2bnw_F, 1pa6_D, 1pp7_E, 1pp7_F, 1tc3_A, 3qe9_B, 6fb8_C, 1pa6_G, 6d0g_C, 5ity_D, 3laj_D, 3laj_B,
4bdy_D, 5j2p_P, 6anq_F, 6an8_F, 6an8_E, 6avm_F, 6u7y_T, 4un3_C, 5fw1_D, 3c25_C, 3c25_D, 3crx_D,
3rn5_K, 4bul_E, 3e54_E, 1tx3_E, 3ebc_E, 5a74_C, 5a72_C, 5cdm_I, 3gp8_X, 4bul_F, 5iwm_F, 6fwr_B,
3zvk_X, 3zvk_Y, 3qyn_E, 4f41_C, 3us0_E, 4z5c_C, 4z58_B, 4z5c_D, 4aae_G, 4aae_E, 4aaf_E, 5w2c_C,
5w2c_D, 1r4o_C, 1n3e_C, 4aab_E, 2gie_E, 1ubd_A, 1ubd_B, 1bdt_F, 1bdt_E, 1per_B, 1t2t_B, 1t2t_C,
1u0c_C, 1u0c_D, 1h1v_B, 1h1v_C, 1j3e_B, 1j3e_C, 1f4k_E, 1f4k_D, 1diz_C, 3e54_C, 1akh_C, 1akh_D,
5a74_E, 1ckt_B, 1ckt_C, 1a35_C, 1a35_D, 1j59_C, 1j59_D, 1kc6_E, 6ki6_C, 6ki6_D, 6lbr_C, 6emy_D,
6k8o_B, 5u01_E, 6pax_B, 6pax_C, 4aab_D, 3c28_D, 1yrn_C, 1yrn_D, 2o5i_G, 2o5i_I, 1qps_N, 1rm1_D,
1rm1_E, 2crx_C, 1zme_A, 1zme_B, 1qri_M, 1qrh_M, 1eri_B, 9icx_T, 1xhv_F, 1xhv_E, 2alz_T, 5cdm_E,
4izz_C, 3ubt_C, 4e10_C, 4e10_D, 3d1n_A, 3d1n_B, 3e44_F, 3vyq_D, 3vyq_C, 1t8e_D, 3vea_M,
2ypf_B, 2ypf_C, 5d5v_A, 5d5v_C, 2qk9_C, 4u6p_C, 4un3_D, 6fi8_E, 4da4_C, 4da4_D, 5czz_D, 6fqv_E,
4fbu_C, 3zhm_B, 3zhm_C, 4aa6_D, 2r5y_C, 2r5y_D, 1huo_D, 1rr8_A, 1mnv_A, 1ej9_C, 1ej9_D, 1huz_D,
1huo_C, 2r5z_C, 2r5z_D, 1gt0_A, 1cf7_D, 1cf7_C, 9icw_T, 5yi2_C, 2gli_C, 9icw_P

waters in DNA dinucleotides

Ensemble of the analyzed DNA structures containing 2,727 DNA chains, 48,401 dinucleotides, and 343,875 associated water molecules.

| | A_A | A_T | A_C | A_G | T_A | T_T | T_C | T_G | C_A | C_T | C_C | C_G | G_A | G_T | G_C | G_G | sum |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|
| AA00 | 321 | 618 | 1,100 | 1,111 | 739 | 463 | 993 | 693 | 939 | 1,182 | 3,326 | 2,103 | 464 | 1,758 | 2,725 | 2,549 | 21,084 |
| AA01 | 9 | 36 | 103 | 390 | 276 | 51 | 57 | 107 | 123 | 94 | 160 | 516 | 498 | 24 | 391 | 976 | 3,811 |
| AA02 | 989 | 707 | 175 | 77 | 802 | 1,013 | 363 | 131 | 159 | 277 | 509 | 354 | 55 | 170 | 185 | 30 | 5,996 |
| AA03 | 0 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 21 | 18 | 0 | 9 | 18 | 16 | 99 |
| AA04 | 2 | 31 | 90 | 40 | 89 | 18 | 19 | 47 | 6 | 49 | 101 | 65 | 30 | 22 | 79 | 289 | 977 |
| AA05 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| AA06 | 5 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 0 | 8 | 25 | 135 | 197 |
| AA07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| AA08 | 36 | 21 | 130 | 98 | 16 | 9 | 69 | 102 | 10 | 62 | 157 | 45 | 16 | 14 | 317 | 134 | 1,236 |
| AA09 | 0 | 0 | 9 | 0 | 14 | 0 | 10 | 0 | 9 | 0 | 27 | 15 | 2 | 0 | 9 | 0 | 95 |
| AA10 | 0 | 0 | 7 | 2 | 16 | 0 | 5 | 0 | 18 | 0 | 0 | 18 | 0 | 7 | 0 | 37 | 110 |
| AA11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| AA12 | 0 | 0 | 7 | 9 | 0 | 0 | 12 | 0 | 18 | 0 | 12 | 69 | 6 | 5 | 0 | 14 | 152 |
| AA13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AA51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 3 | 0 | 0 | 0 | 14 |
| AB01 | 177 | 598 | 357 | 415 | 1,175 | 842 | 612 | 994 | 1,486 | 1,391 | 813 | 3,775 | 315 | 433 | 890 | 422 | 14,695 |
| AB02 | 13 | 97 | 15 | 31 | 24 | 6 | 12 | 54 | 5 | 29 | 30 | 51 | 14 | 7 | 18 | 111 | 517 |
| AB03 | 50 | 135 | 112 | 98 | 309 | 238 | 276 | 381 | 398 | 303 | 285 | 796 | 106 | 45 | 249 | 120 | 3,901 |
| AB04 | 13 | 104 | 79 | 385 | 612 | 38 | 14 | 207 | 53 | 224 | 78 | 80 | 40 | 334 | 103 | 363 | 2,727 |
| AB05 | 144 | 406 | 300 | 346 | 317 | 283 | 87 | 301 | 278 | 556 | 559 | 691 | 187 | 1,205 | 262 | 581 | 6,503 |
| AB1S | 0 | 0 | 0 | 167 | 0 | 0 | 0 | 16 | 2 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 213 |
| AB2S | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 25 |
| BA01 | 130 | 403 | 845 | 131 | 41 | 233 | 227 | 62 | 115 | 286 | 846 | 268 | 237 | 488 | 1,409 | 287 | 6,008 |
| BA05 | 1,053 | 3,542 | 2,717 | 1,319 | 562 | 1,025 | 1,933 | 234 | 774 | 794 | 7 | 3 | 726 | 1,564 | 3,456 | 1,243 | 20,952 |
| BA08 | 73 | 84 | 263 | 656 | 123 | 37 | 232 | 150 | 111 | 28 | 199 | 562 | 291 | 126 | 1,057 | 309 | 4,301 |
| BA09 | 25 | 294 | 335 | 104 | 22 | 0 | 15 | 67 | 12 | 42 | 0 | 8 | 86 | 24 | 103 | 258 | 1,395 |
| BA10 | 18 | 13 | 201 | 80 | 245 | 62 | 88 | 101 | 70 | 0 | 49 | 44 | 27 | 98 | 185 | 102 | 1,383 |
| BA13 | 147 | 67 | 100 | 131 | 23 | 0 | 109 | 88 | 78 | 10 | 31 | 8 | 245 | 142 | 141 | 131 | 1,451 |
| BA16 | 90 | 24 | 11 | 62 | 17 | 10 | 35 | 52 | 21 | 0 | 0 | 14 | 311 | 12 | 126 | 70 | 855 |
| BA17 | 22 | 33 | 27 | 33 | 44 | 104 | 44 | 18 | 70 | 0 | 71 | 80 | 24 | 34 | 114 | 5 | 723 |
| BB00 | 8,838 | 6,148 | 4,496 | 7,208 | 7,082 | 7,866 | 6,567 | 8,111 | 5,529 | 5,126 | 5,235 | 8,275 | 8,909 | 7,766 | 7,612 | 10,897 | 115,665 |
| BB01 | 3,159 | 4,388 | 1,783 | 1,622 | 1,513 | 5,483 | 3,746 | 1,509 | 835 | 2,381 | 1,936 | 1,041 | 728 | 2,615 | 1,952 | 1,213 | 35,904 |
| BB02 | 540 | 850 | 485 | 316 | 214 | 621 | 261 | 180 | 151 | 183 | 250 | 82 | 221 | 366 | 379 | 390 | 5,489 |
| BB03 | 21 | 61 | 308 | 42 | 38 | 173 | 73 | 1 | 12 | 15 | 46 | 13 | 11 | 44 | 79 | 58 | 995 |
| BB04 | 1,365 | 205 | 254 | 1,372 | 1,097 | 121 | 348 | 1,615 | 1,089 | 333 | 464 | 2,469 | 1,700 | 282 | 936 | 1,936 | 15,586 |
| BB05 | 5 | 3 | 119 | 83 | 51 | 4 | 9 | 0 | 10 | 8 | 3 | 0 | 18 | 16 | 21 | 12 | 362 |
| BB07 | 954 | 65 | 107 | 889 | 1,958 | 52 | 152 | 2,293 | 2,413 | 253 | 529 | 2,834 | 2,010 | 164 | 1,884 | 3,474 | 20,031 |
| BB08 | 4 | 22 | 31 | 7 | 55 | 2 | 3 | 44 | 4 | 15 | 6 | 65 | 20 | 269 | 56 | 47 | 650 |
| BB10 | 55 | 20 | 7 | 23 | 28 | 9 | 19 | 14 | 49 | 14 | 78 | 114 | 39 | 29 | 34 | 35 | 567 |
| BB11 | 13 | 15 | 31 | 12 | 8 | 65 | 23 | 30 | 36 | 14 | 29 | 89 | 8 | 4 | 29 | 26 | 432 |
| BB12 | 282 | 320 | 757 | 29 | 5 | 55 | 238 | 13 | 1 | 9 | 57 | 6 | 271 | 145 | 304 | 65 | 2,557 |
| BB13 | 23 | 8 | 19 | 16 | 7 | 9 | 17 | 4 | 4 | 17 | 0 | 6 | 7 | 30 | 44 | 4 | 215 |
| BB14 | 4 | 5 | 0 | 1 | 0 | 2 | 1 | 4 | 5 | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 30 |
| BB15 | 16 | 83 | 186 | 39 | 65 | 84 | 160 | 24 | 25 | 42 | 165 | 43 | 50 | 78 | 155 | 111 | 1,326 |
| BB16 | 183 | 60 | 44 | 64 | 358 | 74 | 64 | 229 | 304 | 268 | 457 | 350 | 87 | 227 | 136 | 111 | 3,016 |
| BB17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 13 | 0 | 2 | 29 | 50 |
| BB1S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 290 | 290 |
| BB20 | 0 | 0 | 0 | 0 | 0 | 364 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 364 |
| BB2S | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 539 | 546 |
| BBS1 | 218 | 151 | 72 | 348 | 17 | 29 | 0 | 0 | 5 | 0 | 0 | 0 | 95 | 34 | 16 | 2,179 | 3,164 |
| IC01 | 30 | 0 | 0 | 0 | 0 | 11 | 0 | 106 | 0 | 19 | 0 | 38 | 13 | 8 | 0 | 0 | 225 |
| IC02 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| IC03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 14 |
| IC04 | 0 | 10 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 41 | 0 | 0 | 2 | 0 | 107 |
| IC05 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 40 | 0 | 0 | 263 | 2 | 5 | 0 | 0 | 332 |
| IC06 | 0 | 0 | 9 | 25 | 21 | 65 | 0 | 72 | 0 | 5 | 12 | 213 | 0 | 0 | 11 | 3 | 436 |
| IC07 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| OP01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OP02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OP03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OP04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OP05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OP06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OP07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OP08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

waters in DNA dinucleotides

| | | | | | | | | | | | | | | | | | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| OP09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| OP11 | 0 | 4 | 0 | 4 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 12 | 39 | |
| OP12 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 7 | 0 | 13 | 0 | 0 | 29 | 16 | 71 | |
| OP13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP15 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 153 | 0 | 0 | 0 | 165 | |
| OP16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP19 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 101 | 0 | 0 | 136 | |
| OP1S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 312 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 312 | |
| OP20 | 0 | 31 | 101 | 0 | 0 | 20 | 37 | 0 | 0 | 3 | 25 | 0 | 0 | 41 | 23 | 281 | |
| OP21 | 0 | 15 | 23 | 0 | 7 | 0 | 263 | 32 | 0 | 0 | 0 | 10 | 0 | 8 | 0 | 358 | |
| OP22 | 0 | 0 | 0 | 0 | 0 | 265 | 0 | 12 | 21 | 12 | 0 | 0 | 10 | 54 | 34 | 408 | |
| OP23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 26 | |
| OP25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | |
| OP27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | |
| OP29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OP31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| OPS1 | 0 | 0 | 22 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | |
| ZZ01 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | |
| ZZ02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ZZ1S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 110 | 0 | 11 | 2,835 | 0 | 0 | 11 | 3,033 | |
| ZZ2S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 138 | 44 | 0 | 0 | 896 | 0 | 0 | 0 | 1,078 | |
| ZZS1 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 1,665 | 1,821 | |
| ZZS2 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 504 | 546 | |
| NANT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| sum | 19,032 | 19,691 | 15,977 | 17,823 | 18,044 | 19,899 | 17,270 | 18,605 | 15,451 | 14,096 | 16,618 | 29,345 | 18,051 | 18,910 | 27,784 | 29,669 | 316,265 |

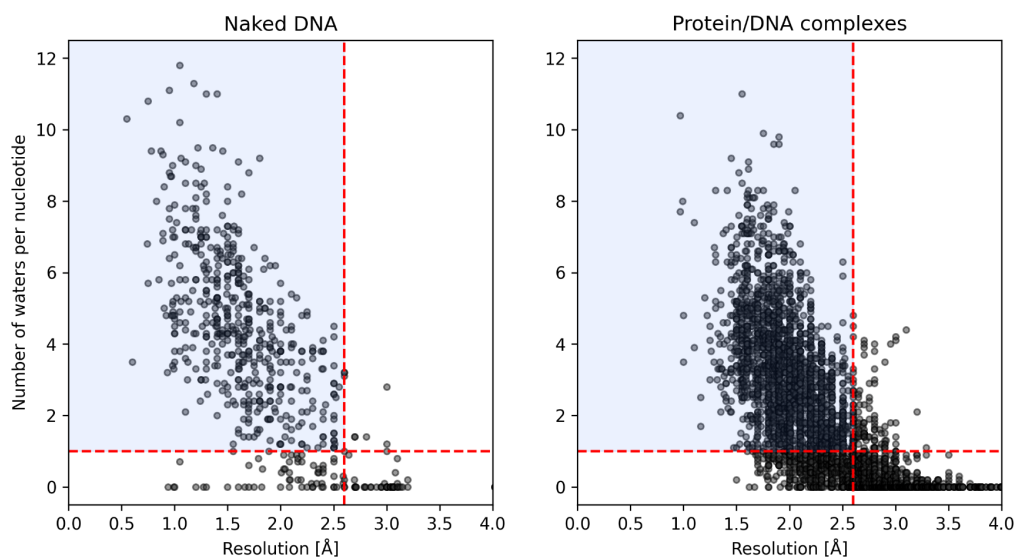


Figure S1. Predicted minor groove hydration in the Z-DNA structure 7jy2 {Harp, 2021 #6859}. Predicted HSs for bases and sugar-phosphate backbone are shown as cyan and yellow spheres, respectively; the corresponding hydration probability densities are shown as cyan and yellow mesh. The HSs forming a spine of hydration along the DNA axis link the O2(C) atoms from opposing strands. The HSs of the N2(G) atoms form water bridges with phosphate OP2 atoms.

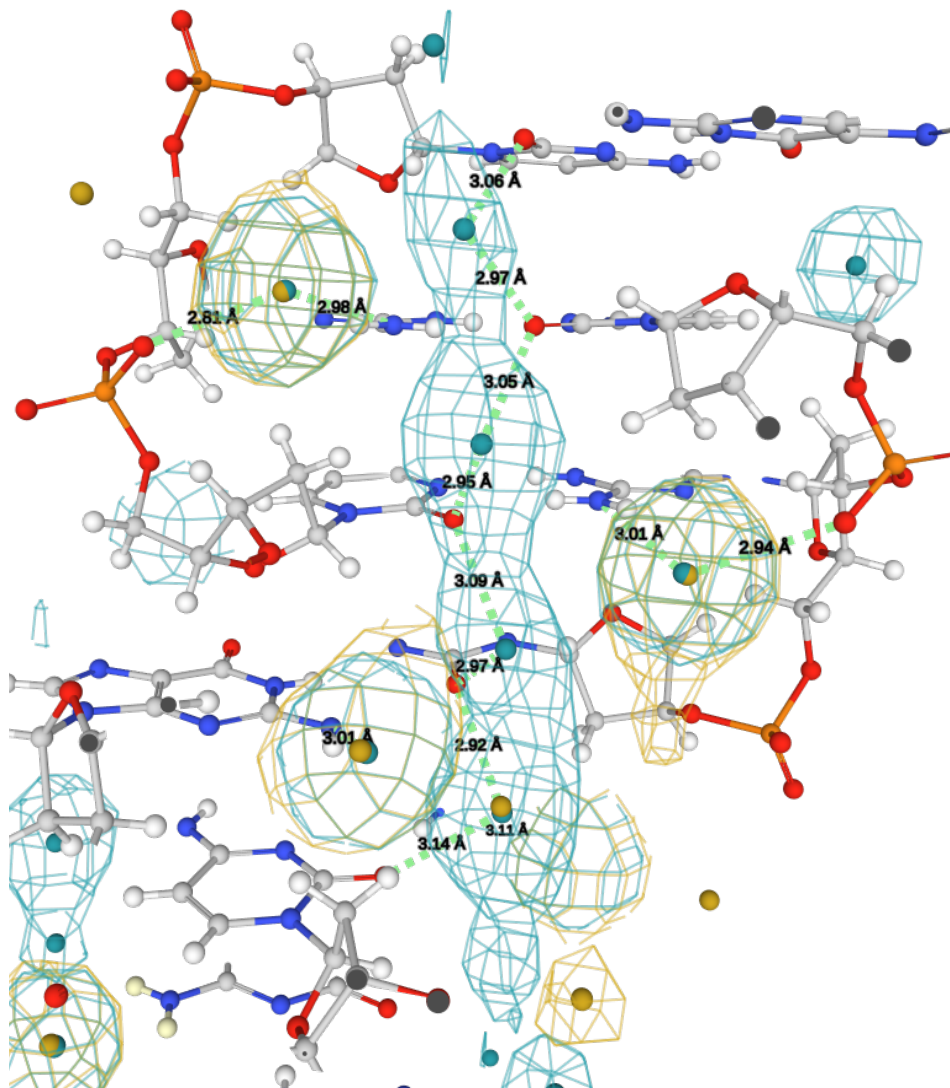


Figure S2. Predicted minor groove hydration in the Z-DNA structure 7jy2 {Harp, 2021 #6859}. Predicted HSs for bases and sugar-phosphate backbone are shown as cyan and yellow spheres, respectively; the corresponding hydration probability densities are shown as cyan and yellow mesh. The HSs forming a spine of hydration along the DNA axis link the O2(C) atoms from opposing strands. The HSs of the N2(G) atoms form water bridges with phosphate OP2 atoms.

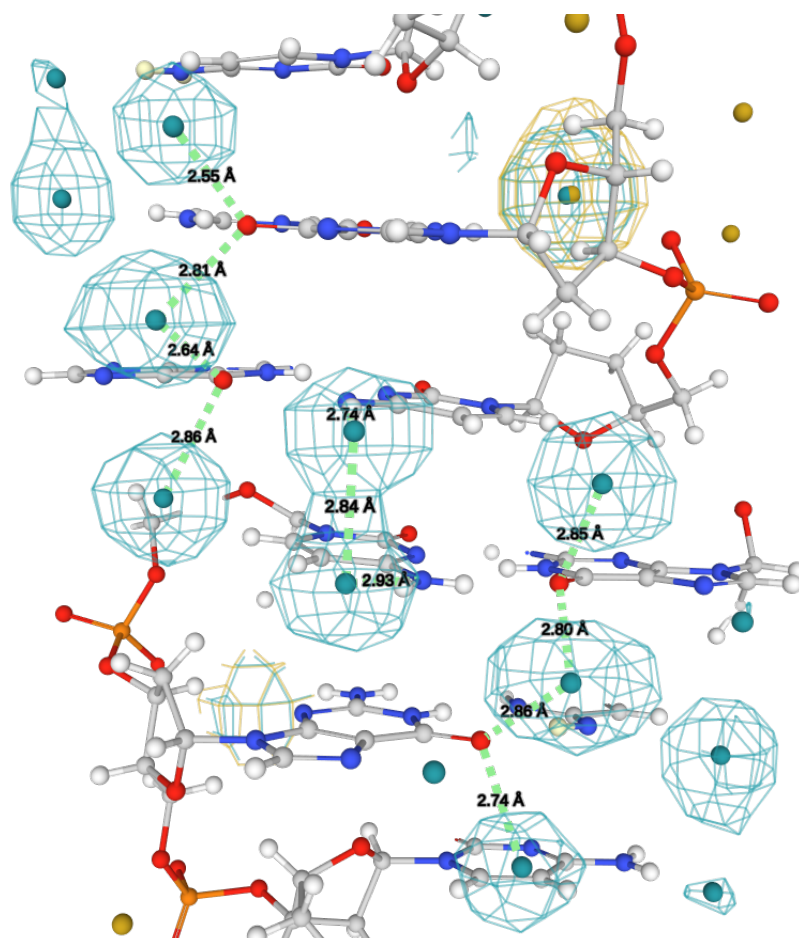


Figure S3. Predicted major groove hydration in the Z-DNA structure 7jy2 {Harp, 2021 #6859}. Predicted HSs for bases and sugar-phosphate backbone are shown as cyan and yellow spheres, respectively; the corresponding hydration probability densities are shown as cyan and yellow mesh. The O6(G) atoms have two HSs lying between the base planes, the one further along the 5' to 3' direction forms an O6(G)...HS...O6(G) bridge with the preceding guanine in the opposing strand. The N4(C) atoms are hydrated by a single HS in plane with the cytosine. The HSs of the cytosines in the opposing strands are aligned vertically along the helical axis and form a double water bridge N4(C)...HS...HS...N4(C).