Alanine-204 corresponds to Gly-169 in PKA RI (55). Furthermore, sequence alignments show that Gly-238 in PKA RI is anticipated based on the co-evolutionary genomic analyses (Fig. 1). It is detectable in our spectra (Fig. 4), but this site is clearly detectable in our spectra (Fig. 4). Changes of the Gly-238 site could not be probed through previous spectroscopic analyses (19), but this site is clearly detectable in our spectra (Fig. 4). The two residues have been proposed to be critical elements of the CBD allosteric network, based on recent extensive evolutionary studies (55). These changes involve both hot and cold sites. This mixed pattern is fully consistent with a rearrangement of the packing contacts involving the C termini of these helices, accounting for 6 rotation also perturbs the C-terminus of RI (PDB code 1RGS). Another cluster of allosteric cAMP-dependent dynamic changes involves the hinge (55), which plays a pivotal role in the cAMP-mediated activation of PKA as determined structure, dynamics, and signaling pathways and amyloid fibril formation. To learn more, see: Obst et al., Geobiology 7 (2009) 577.
Facilities

Nuclear Magnetic Resonance
Oldest NMR facility in Canada, housing 10 spectrometers with field strengths from 200 to 700 MHz, including solid-state and biomolecular NMR.

Analytical X-Ray Diffraction
This facility provides efficient and professional single-crystal and 2-dimensional powder X-ray analyses, and develops advanced techniques in X-ray Diffraction.

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Equipped with IR spectrometers (near, mid, and far IR), UV-Vis, fluorescence, and Raman. This facility also includes elemental analysis equipment.

Faculty

ORGANIC
Adronov (polymer)
Berti (biological, enzymes)
Brook (silicon, polymer)
Capretta (synthesis)
Harrison (biosynthesis)
Leigh (physical organic)
Li (nucleic acids)
McNulty (synthesis)
Stöver (polymer)

INORGANIC
Emslie (transition metal)
Mozharivskyj (solid state)
Schrobilgen (main group)
Valliant (radiochemistry)
Vargas-Baca (main group)

PHYSICAL/THEORETICAL
Ayers (computational)
Goward (materials)
Hitchcock (spectroscopy)
Kruse (surface)
Melacini (biomolecular NMR)
Saravanamutlu (materials)

ANALYTICAL
Brennan (bio-sensors)
Britz-McKibbin (diagnostics)
McCarry (environmental)
Terlouw (mass spectrometry)

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