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Letters to the Editor

Resonance assignments of *Escherichia coli* AlkB: a key 2-oxoglutarate and Fe(II) dependent dioxygenase of the adaptive DNA-repair response

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AlkB is a 216-residue soluble protein expressed as part of the Adaptive response to alkylating agents in *E. coli*, and is involved in the repair of methylated DNA. AlkB catalyses the demethylation of 1-methyladenine and 3-methylcytosine coupled to the decarboxylation of 2-oxoglutarate (2OG) to succinate and CO_2 (Trewick et al., 2002). Current studies are re-defining its substrate specificity as it is shown to be active on a number of less frequent lesions found in ssDNA and more recently RNA, the first documented observation of direct RNA repair (Ougland et al., 2004). AlkB is currently the target of at least 3 structural genomic initiatives and numerous crystallisation trials, but as yet no structural data is forthcoming. Using 2D and 3D heteronuclear NMR experiments with ^{13}C, ^{15}N-labelled AlkB, complete ^{15}N, NH, H^{α}, $^{13}C_{\alpha}$ and $^{13}C_{\beta}$ assignments have been made for 182 residues. Side-chain assignments have been made for 138 residues. No assignments could be made for 32 residues, most of which have been predicted to be proximal to the Fe(II) centre and therefore affected by paramagnetic broadening and/or conformational exchange. See supplementary data and BMRB accession number 6685.

References: Ougland et al. (2004) *Mol. Cell.*, **16**, 107–116; Trewick et al. (2002) *Nature*, **419**, 174–178.

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Backbone ^{1}H, ^{13}C, and ^{15}N resonance assignments for the two 13 kD Ras associating domains (RA1 and RA2) from phospholipase Cε

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Phospholipase Cε (PLCε) is a novel member of phosphoinositide-specific phospholipase C enzymes with a unique regulatory link to Ras GTP-ases (Wing et al., 2003). PLCε contains two Ras-association or Ras-binding (RA/RB) domains. Here we report the NMR resonance assignments for both RA1 (2006–2114) and RA2 (2131–2246), where RA2 is known to bind Ras. 2D/3D NMR experiments were used to obtain near complete resonance assignments of uniformly ^{13}C, ^{15}N-labelled RA1 and R2150L-RA2. Approximately 90% of aliphatic side chain resonances for both domains were assigned. The majority of resonances that could not be assigned are associated with either the unstructured N-termini or attributed to regions of conformational exchange broadening. BMRB deposit: Accession Numbers 6624 (RA1) and 6635 (RA2).

Reference: Wing et al. (2003) *Mol. Interv.*, **3**, 237–280.

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