

## Letters to the Editor

### NMR assignment of new Thioredoxin-like protein YkuV from *Bacillus subtilis*

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YkuV (148 amino acids) from *Bacillus subtilis* is identified as a new thioredoxin-like protein based on sequence homology. Thioredoxin is a ubiquitous protein, which serves as a general protein disulfide oxidoreductase (Holmgren, 1985). Bioinformatics analysis of YkuV shows that protein ResA shares the most homologous in PDB database (19% identity), which is the soluble domain of a membrane-anchored protein. (Craw et al., 2004). We report the nearly complete  $^1\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  resonance assignments of YkuV. 2D and 3D heteronuclear NMR experiments were performed with uniformly  $^{15}\text{N}$ -,  $^{13}\text{C}$ -labelled YkuV. More than 97% backbone and 90% side-chain  $^1\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  resonance assignments are obtained with the exception of residues H42, S131, M133 and K134. BMRB deposits with accession number 6603.

References: Holmgren (1985) *Annu. Rev. Biochem.*, **54**, 237–271; Craw et al. (2004) *J. Biol. Chem.*, **279**, 23654–23660.

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### $^1\text{H}$ , $^{15}\text{N}$ , and $^{13}\text{C}$ resonance assignments of human interleukin-2

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Interleukin-2 (IL-2) is a cytokine consisting of 133 residues, which governs the growth, activation, and differentiation of T cells. Inhibition of IL-2 is an ongoing strategy for the discovery of immunosuppressive drugs, and NMR structural studies can provide guidance. The site on IL-2 that interacts with IL-2R $\alpha$  has been mapped (Emerson et al., 2003). Small molecule inhibitors have been discovered that bind to this site. To date, only  $^1\text{H}$  and  $^{15}\text{N}$  chemical shift values have been obtained for IL-2 (Mott et al., 1992).  $^{13}\text{C}$  assignments will be essential for detailed structures and dynamics.  $^{13}\text{C}$ ,  $^{15}\text{N}$ -labeled human IL-2 was produced in the yeast *Pichia pastoris*. All  $^1\text{H}$ ,  $^{15}\text{N}$ , and  $^{13}\text{C}$  chemical shift assignments for the aliphatic resonances of IL-2 are herein reported, with the following exceptions: the  $^{15}\text{NH}$  of Asn77; the  $^{13}\text{C}\alpha$ 's of Lys64, Ser75, and Arg81; and portions of the side-chains of Ser4, Asp20, Cys58, Lys64, Cys105, and Glu110. BMRB accession number 6621.

References: Emerson et al. (2003) *Protein Sci.*, **12**, 811–822; Mott et al. (1992) *Biochemistry.*, **31**, 7741–7744.

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