

Letter to the Editor

Resonance assignments of the α subunit of human eukaryotic initiation factor 2 (eIF2 α)

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Eukaryotic initiation factor 2 (eIF2) recruits initiator methionyl tRNA to the 40S ribosomal subunit for the translational initiation. The alpha subunit of eIF2 (eIF2 α) functions primarily as a regulatory subunit and is phosphorylated by many eIF2 α -kinases, such as PKR. We have carried out nuclear magnetic resonance assignments of the solubility-enhanced mutant human eIF2 α , which comprises residues Ser4 to Asp302 and contains three mutations, A27Q, L46H and V71K, by analyzing many measured spectra as described elsewhere (Ito and Wagner, 2004; Ito et al., 2004). We have assigned 96% of the backbone (H^N , N, C^α and C') resonances. In addition, 98% of the resonances in ILV-methyl groups (positions of $\delta 1$ in isoleucine, $\delta 1$ and $\delta 2$ in leucine, and $\gamma 1$ and $\gamma 2$ in valine), 93% of the resonances in the FY-aromatic protons (positions of δ , ϵ , and ζ in phenylalanine and δ and ϵ in tyrosine), and 73% of the C^β resonances have been assigned. Using these data, we have successfully determined the tertiary structure of eIF2 α (Ito et al., 2004). The chemical shifts were deposited in BMRB with the Accession No. 10023.

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References: Ito and Wagner (2004) *J. Biomol. NMR* **28**, 357–367; Ito, T. et al. (2004) *Structure*, **12**, 1693–1704.

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