P-20

Nature of interactions between the full transcriptional activation domain of human p53 and human double minute-2

Seung-Wook Chi, Si-Hyung Lee* and Kyou-Hoon Han

Laboratory of Proteome Analysis, Division of Genomics and Proteomics, KRIBB, Yusong P. O. Box 115, Taejon 305-600, Korea

Heteronuclear magnetic resonance spectroscopy has been applied to investigate the interactions between the full 73-residue transcriptional activation domain of human p53 and an N-terminal domain (3-109) of human double minute-2 that contains the helix binding pocket (Kussie, P. H., Gorina, S., Marechal, V., Elenbass, B., Moreau, J., Levine, A. J., and Pavletich, N. P. (1996) *Science,* 274, 948-953). Upon titration with the target protein the resonance peaks from the helix-forming residues Thr18-Leu26 in the N-terminal half of the p53 transcriptional activation domain disappear, followed by those from the turn-forming residues in the C-terminal half. The results suggest that a second binding site for the p53 transcriptional activation domain, different from the helix-binding pocket, exist in the human double minute-2.

Funding for the above work has been supported by NSM0140132 from the Ministry of Science and Technology of Korea to K. H.