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Stress alarm

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The hRad17 human [checkpoint protein](#) is homologous to yeast proteins (Rad17 in *Schizosaccharomyces pombe* and Rad24 in *Saccharomyces cerevisiae*) that regulate the stress response to DNA damage. In the June 21 [Nature](#), Bao *et al.* describe how hRad17 functions in genome surveillance in human cells (*Nature* 2001, **411**:969-974). They found that hRad17 could be co-immunoprecipitated with the checkpoint kinases ATR and ATM. The interaction was induced by DNA damage and led to phosphorylation of the carboxy terminus of the hRad17 protein on two serine residues. A mutant form of hRad17 that could not be phosphorylated disturbed the G2 checkpoint following ionizing radiation. The mutant also failed to interact with hRad1, a component of the Rad1-Rad9-Hus1 checkpoint complex. The phosphorylation of hRad17 by ATM/ATR kinases is an early event in sounding the alarm following DNA damage.

References

1. The G2-phase DNA-damage checkpoint
2. *Nature*,, [<http://www.nature.com>]