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# Armadillo Repeat

National Cancer Institute

## Source

National Cancer Institute. *Armadillo Repeat*. NCI Thesaurus. Code C14101.

Identified in over 240 functionally diverse proteins from yeast to man, ARM Repeats are approximately 40-amino acids long and composed of two longer anti-parallel helices (H2 and H3) that follow a perpendicular short helix (H1). Tandem repeats form a right-handed superhelix (3 helices per unit); tight repeat packing creates a cylindrical hydrophobic core throughout the structure. Lined by highly conserved residues, the positively charged groove of the superhelix appears to mediate interaction with acidic surfaces of target proteins. Despite amino acid variability, ARM repeat structures are highly conserved. Though involved in protein-protein interactions, no common features among target proteins have been identified. ARM repeats have a common phylogenetic origin with the HEAT repeat; both contain seven highly conserved hydrophobic residues.