Abstract

Mutants of Caenorhabditis elegans having about 10% of wild-type activity of the aspartyl protease cathepsin D have been isolated by screening. Mutant homozygotes have normal growth rates and no obvious morphological or developmental abnormalities. The mutant gene (cad-1) has been mapped to the right extremity of linkage group II. Heterozygous animals (cad-1/+) show intermediate enzyme levels and animals heterozygous for chromosomal deficiencies of the right extremity of linkage group II have 50% of wild-type activity. Cathepsin D purified from a mutant strain has a lower activity per unit mass of pure enzyme. These data suggest that cad-1 is a structural gene for cathepsin D.