

A cDNA library of the eutardigrade *Hypsibius klebelsbergi* Mihelčič, 1959 and analysis of the actin gene

Ernst KIEHL, Hieronymus DASTYCH¹⁾, Jochen D'HAESE, and Hartmut GREVEN*

Institut für Zoomorphologie und Zellbiologie, Universität Düsseldorf, Universitätsstr.1, D-40225 Düsseldorf, Germany

¹⁾Biozentrum Grindel und Zoologisches Museum. Universität Hamburg, Martin-Luther-King-Platz 3, D-20146 Hamburg, Germany

*e-mail corresponding author: grevenh@uni-duesseldorf.de

ABSTRACT

A cDNA library was constructed from the glacier-dwelling eutardigrade *Hypsibius klebelsbergi* from more than 2000 individuals collected in the Austrian Central Alps. RNA, DNA and proteins were successively isolated by the Trizol[®]-method. From the RNA preparation a cDNA library was constructed with the cDNA inserted unidirectionally in the phagemid expression vector TriplEx2. The primary gene library had a titre of 10^7 pfu ml⁻¹ and the final amplified gene library a titre of 6×10^9 pfu ml⁻¹. The average insert length was about 1.6 kb. The partial sequence of *H. klebelsbergi* actin (746 bp) showed highest similarity to GenBank data of *Drosophila melanogaster* actin at the nucleic acid level (84.9%) and at the amino acid level (98%). Compared with actin fragments of the eutardigrades *Ramazzottius oberhaeuseri* (450 bp) and *Macrobiotus* sp. (453 bp) the identities were 85% - 81% and 100% - 98% with respect to the nucleic/amino acids. Identity with actin fragments (359 bp) of *Hypsibius dujardini* from GenBank was 96% - 100%.

Key words: Eutardigrada, cDNA library, mRNA, actin
