

[Open Peer Review on Qeios](#)

Long Interspersed Nucleotide Element-1

National Cancer Institute

Source

National Cancer Institute. *Long Interspersed Nucleotide Element-1*. NCI Thesaurus. Code C120020.

A long interspersed element (LINE) found in mammals. The LINE-1 element is the only active LINE in humans and is approximately 6,000 base pairs long. This nucleotide sequence consists of two non-overlapping open reading frames (ORF) flanked by a 5' untranslated region (UTR), which contains a strong RNA polymerase II promoter sequence, and target site duplications. The first ORF encodes a 500 amino acid, ~40 kDa leucine zipper-containing RNA-binding protein. The second ORF encodes an ~150 kDa protein that has endonuclease and reverse transcriptase activity. Increased LINE-1 copy number is associated with cancer and neuropathy.