

[Open Peer Review on Qeios](#)

# Elongation Factor 1

National Cancer Institute

## Source

National Cancer Institute. *Elongation Factor 1*. NCI Thesaurus. Code C38958.

Heterotrimeric Elongation Factor 1 (containing alpha/beta/gamma or alpha/delta/gamma subunits) is responsible for delivery of aminoacyl tRNAs to the ribosome. Containing domains that bind guanine nucleotides, 80S ribosomes, and aminoacyl-tRNAs, the alpha EF-1 subunit interacts with beta/delta subunits and mediates delivery and GTP-dependent binding of aminoacyl-tRNAs to the 80S ribosome A-site. Homologous beta and delta subunits (guanine nucleotide exchange factors) stimulate GDP/GTP exchange bound to EF-1-alpha; phosphorylation affects the GDP/GTP exchange rate. The conserved gamma subunit contains an EEF1G domain and an N-terminal GST domain that may be involved in regulating EF-1 multisubunit assembly and anchorage to other cellular components. (NCI)