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# Signal Transducer and Activator of Transcription Family Gene

National Cancer Institute

## Source

National Cancer Institute. *Signal Transducer and Activator of Transcription Family Gene*.  
NCI Thesaurus. Code C25991.

Signal Transducer and Activator of Transcription Family Genes encode dual function cytoplasmic Signal Transducer and Activator of Transcription (STAT) proteins that are activated by tyrosine phosphorylation in response to a large number of cytokines, growth factors, and hormones. After activation they form homodimers or heterodimers that translocate to the nucleus where they either bind directly to regulatory DNA cis-elements of specific target genes or act together with other DNA-binding proteins in multiprotein transcription complexes to direct transcription. (NCI)