# Formation of TRAP coactivator complex

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# Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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## Literature references

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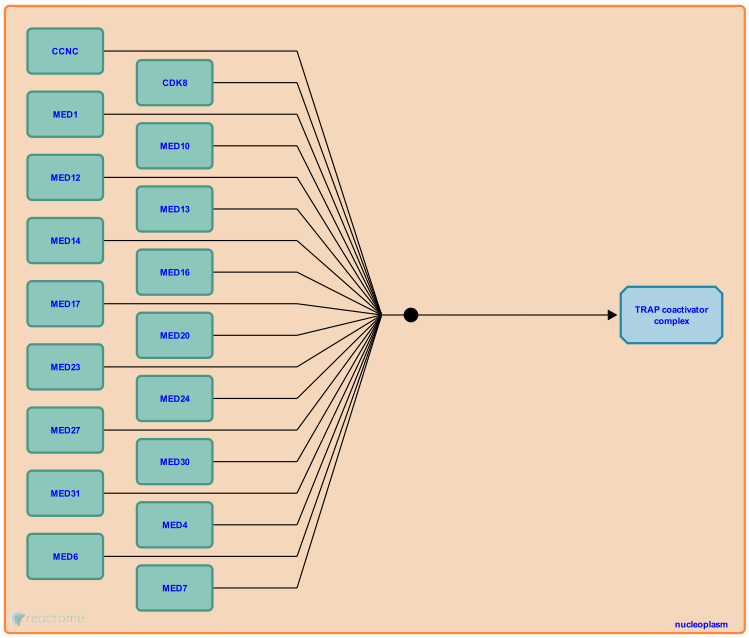
## Formation of TRAP coactivator complex ↗

**Stable identifier:** R-HSA-212380

**Type:** binding

**Compartments:** nucleoplasm




TRAP co-activator complex and assembly

The TRAP co-activator complex is a subset of 18 proteins from the set of at least 31 Mediator proteins that, in different combinations and in different contexts, form specific co-activator or "Adapter" complexes in human cells. These complexes bridge between the basal transcription factors (including Pol II) and tissue-specific transcription factors (TFs) bound to sites within upstream Proximal Promoter regions or distal Enhancer regions (reviewed in Maston, 2006 and Naar, 2001).

The TRAP complex was originally identified and named as a co-activator complex associated with the Thyroid Hormone Receptor member of the nuclear receptor family of transcription factors (Yuan, 1998). It was later determined that many of the components of the TRAP complex are also in the DRIP complex, and in the ARC complex.

The TRAP complex contains the following 14 proteins, which also are common to the DRIP and ARC complexes: MED1, MED4, MED6, MED7, MED10, MED12, MED13, MED14, MED16, MED17, MED23, MED24, CDK8, CycC.

The TRAP complex also contains 4 additional components, which are now called: MED20, MED27, MED30, and MED 31 in the unified nomenclature scheme (Bourbon, 2004).

In addition, these various transcription co-activator proteins identified in mammalian cells were found to be the orthologues or homologues of the Mediator complex proteins in yeast, first identified by Kornberg and colleagues (Kelleher, 1990). The unified nomenclature system for these adapter / co-activator proteins now labels them Mediator 1 through Mediator 31 (Bourbon, 2004).

The order of addition of the TRAP proteins during complex assembly is not fully determined, and may vary in different cell contexts. Therefore, TRAP co-activator complex assembly is represented as a single reaction event, in which all 18 components assemble simultaneously into the TRAP co-activator complex.

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## Editions

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