BACKGROUND

MTGR1 (CBFA2T2, ETO homologous on chromosome 20) is a 604 amino acid protein encoded by the human CBFA2T2 gene. MTGR1 belongs to the CBFA2T family and contains one MYND-type (myeloid translocation protein 8, Nervy and DEAF-1) zinc finger and one TAFH (TBP-associated factor) domain. MTGR1 may function as a complex with the chimeric protein RUNX1/AML1-CBFA2T1/MTG8 which is produced in acute myeloid leukemia with the chromosomal translocation t(8;21). Through this complex MTGR1 may cause the repression of AML1-dependent transcription and the induction of G-CSF/CSF3-dependent cell growth. It is also believed to be a tumor suppressor gene candidate for myeloid tumors with the deletion of the 20q11 region. MTGR1 forms both a homo-oligomer and hetero-oligomer with MTG8 and is ubiquitously expressed in fetal and adult tissues. Deletion of the CBFA2T2 gene has been described in 10%, 5% and 3% of cases in polycythemia vera (PV), myelodysplastic syndromes (MDS) and acute myeloid leukemia (AML), respectively.

REFERENCES