

# MTGR1 (B-7): sc-390114

## BACKGROUND

MTGR1 (CBFA2T2, ETO homologous on chromosome 20) is a nuclear protein encoded by the human CBFA2T2 gene. MTGR1 belongs to the CBFA2T family and contains one MYND-type (myeloid translocation protein 8, Nery and DEAF-1) zinc finger and one TAFH (TBP-associated factor) domain. MTGR1 may function within the RUNX1/AML1-ETO/MTG8 chimeric protein complex which is produced from the chromosomal translocation t(8;21), which is also implicated with an acute myeloid leukemia. Within the RUNX complex, MTGR1 causes repression of RUNX1-dependent transcription and then induces G-CSF/CSF3-dependent growth. Therefore, MTGR1 is a tumor suppressor candidate for myeloid tumors containing a deletion within the 20q10-13 region. MTGR1 forms both a homo-oligomer and a hetero-oligomer with MTG8 and is ubiquitously expressed in fetal and adult tissues. CBFA2T2 deletion has been found in 10% of polycythemia vera (PV) cases.

## CHROMOSOMAL LOCATION

Genetic locus: CBFA2T2 (human) mapping to 20q11.21; Cbfa2t2 (mouse) mapping to 2 H1.

## SOURCE

MTGR1 (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 55-93 within an internal region of MTGR1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MTGR1 (B-7) is available conjugated to agarose (sc-390114 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390114 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390114 PE), fluorescein (sc-390114 FITC), Alexa Fluor® 488 (sc-390114 AF488), Alexa Fluor® 546 (sc-390114 AF546), Alexa Fluor® 594 (sc-390114 AF594) or Alexa Fluor® 647 (sc-390114 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390114 AF680) or Alexa Fluor® 790 (sc-390114 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390114 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

MTGR1 (B-7) is recommended for detection of MTGR1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MTGR1 (B-7) is also recommended for detection of MTGR1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MTGR1 siRNA (h): sc-62645, MTGR1 siRNA (m): sc-62646, MTGR1 shRNA Plasmid (h): sc-62645-SH, MTGR1 shRNA Plasmid (m): sc-62646-SH, MTGR1 shRNA (h) Lentiviral Particles: sc-62645-V and MTGR1 shRNA (m) Lentiviral Particles: sc-62646-V.

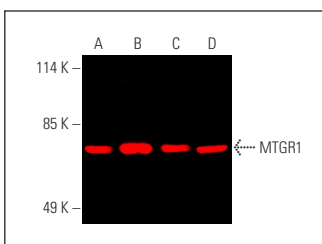
Molecular Weight of MTGR1: 67 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or Jurkat nuclear extract: sc-2132.

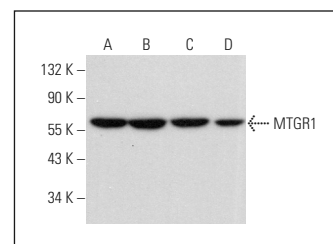
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



MTGR1 (B-7): sc-390114. Near-Infrared western blot analysis of MTGR1 expression in HeLa (A) and Jurkat (B) nuclear extracts and HeLa (C) and CCRF-CEM (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



MTGR1 (B-7): sc-390114. Western blot analysis of MTGR1 expression in HeLa (A), CCRF-CEM (B), ALL-SIL (C) and SP2/O (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Chen-Wichmann, L., et al. 2019. Compatibility of RUNX1/ETO fusion protein modules driving CD34<sup>+</sup> human progenitor cell expansion. *Oncogene* 38: 261-272.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.