

Anti-Tet2 antibody - N-terminal ab230358

[3 References](#) [7 Images](#)

Overview

Product name	Anti-Tet2 antibody - N-terminal
Description	Rabbit polyclonal to Tet2 - N-terminal
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, IP, ICC/IF, ChIP
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment within Human Tet2 (N terminal). The exact sequence is proprietary. Database link: Q6N021
Positive control	ChIP: U-2 OS chromatin extract; WB: HEK-293T, A431, HeLa and HepG2 whole cell lysate; DDDDK-human Tet2-transfected HEK-293T whole cell lysate; IHC-P: Human breast cancer and cervical carcinoma tissues; IF: HeLa cells; IP: HEK-293T whole cell lysate.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab230358 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/1000.
WB		1/500 - 1/3000. Predicted molecular weight: 224 kDa.
IP		1/100 - 1/500.
ICC/IF		1/100 - 1/1000.
ChIP		Use at an assay dependent concentration.

Target

Function

Catalyzes the conversion of methylcytosine (5mC) to 5-hydroxymethylcytosine (hmC). Plays an important role in myelopoiesis. The clear function of 5-hydroxymethylcytosine (hmC) is still unclear but it may influence chromatin structure and recruit specific factors or may constitute an intermediate component in cytosine demethylation.

Tissue specificity

Broadly expressed. Highly expressed in hematopoietic cells; highest expression observed in granulocytes. Expression is reduced in granulocytes from peripheral blood of patients affected by myelodysplastic syndromes.

Involvement in disease

Note=TET2 is frequently mutated in myeloproliferative disorders (MPD). These constitute a heterogeneous group of disorders, also known as myeloproliferative diseases or myeloproliferative neoplasms (MPN), characterized by cellular proliferation of one or more hematologic cell lines in the peripheral blood, distinct from acute leukemia. Included diseases are: essential thrombocythemia, polycythemia vera, primary myelofibrosis (chronic idiopathic myelofibrosis). Bone marrow samples from patients display uniformly low levels of hmC in genomic DNA compared to bone marrow samples from healthy controls as well as hypomethylation relative to controls at the majority of differentially methylated CpG sites. Defects in TET2 are a cause of polycythemia vera (PV) [MIM:263300]. A myeloproliferative disorder characterized by abnormal proliferation of all hematopoietic bone marrow elements, erythroid hyperplasia, an absolute increase in total blood volume, but also by myeloid leukocytosis, thrombocytosis and splenomegaly.

Note=TET2 is frequently mutated in systemic mastocytosis; also known as systemic mast cell disease. A condition with features in common with myeloproliferative diseases. It is a clonal disorder of the mast cell and its precursor cells. The clinical symptoms and signs of systemic mastocytosis are due to accumulation of clonally derived mast cells in different tissues, including bone marrow, skin, the gastrointestinal tract, the liver, and the spleen.

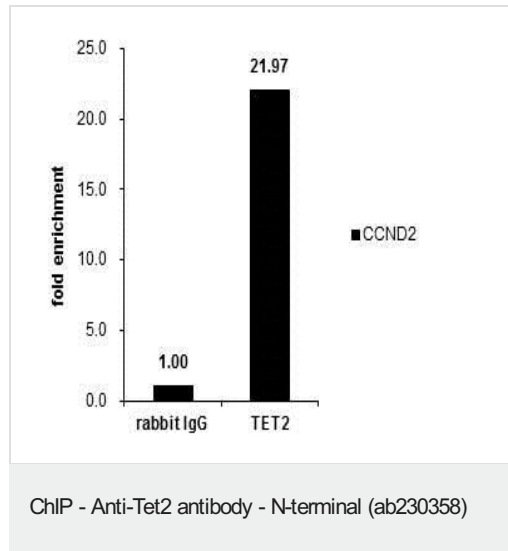
Note=TET2 is frequently mutated in myelodysplastic syndromes, a heterogeneous group of closely related clonal hematopoietic disorders. All are characterized by a hypercellular or hypocellular bone marrow with impaired morphology and maturation, dysplasia of the myeloid, megakaryocytic and/or erythroid lineages, and peripheral blood cytopenias resulting from ineffective blood cell production. Included diseases are: refractory anemia (RA), refractory anemia with ringed sideroblasts (RARS), refractory anemia with excess blasts (RAEB), refractory cytopenia with multilineage dysplasia and ringed sideroblasts (RCMD-RS). Chronic

myelomonocytic leukemia (CMML) is a myelodysplastic/myeloproliferative disease. Myelodysplastic syndromes are considered a premalignant condition in a subgroup of patients that often progresses to acute myeloid leukemia (AML). Bone marrow samples from patients display uniformly low levels of hmC in genomic DNA compared to bone marrow samples from healthy controls as well as hypomethylation relative to controls at the majority of differentially methylated CpG sites.

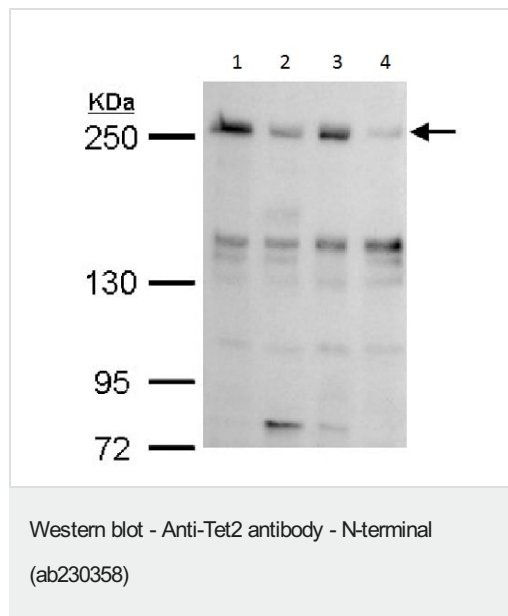
Sequence similarities

Belongs to the TET family.

Images



Cross-linked ChIP was performed with U-2 OS (human bone osteosarcoma epithelial cell line) chromatin extract and 5 µg of either control rabbit IgG or ab230358. The precipitated DNA was detected by PCR with primer set targeting to CCND2.



All lanes : Anti-Tet2 antibody - N-terminal (ab230358) at 1/500 dilution

Lane 1 : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

Lane 2 : A431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 4 : HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate

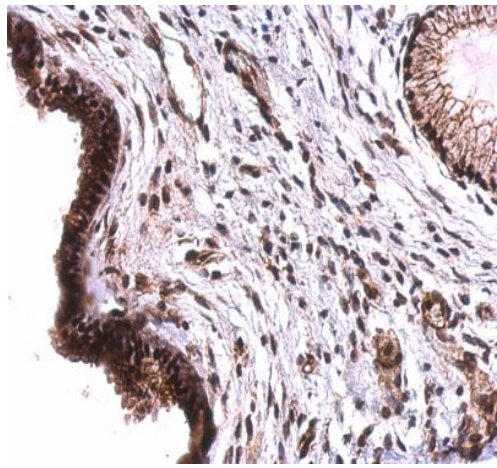
Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Predicted band size: 224 kDa

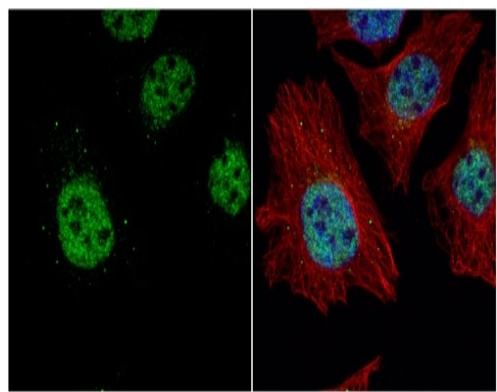
5% SDS-PAGE gel.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tet2 antibody - N-terminal (ab230358)

Paraffin-embedded human cervical carcinoma tissue stained for Tet2 using ab230358 at 1/500 dilution in immunohistochemical analysis.

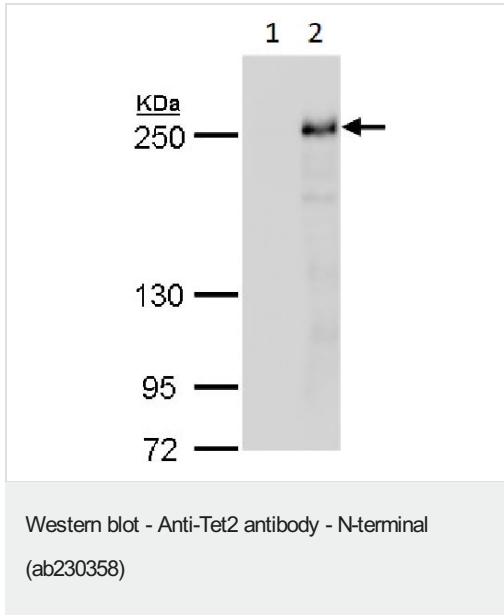
Antigen Retrieval: EDTA based buffer, pH 8.0, 15min.



Immunocytochemistry/ Immunofluorescence - Anti-Tet2 antibody - N-terminal (ab230358)

Immunofluorescence analysis of 4% paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Tet2 (green) with ab230358 at 1/1000 dilution.

Counterstain: Red: alpha Tubulin, a cytoskeleton marker, stained by alpha Tubulin antibody at 1/1000 dilution. Blue: Hoechst 33342 staining.



All lanes : Anti-Tet2 antibody - N-terminal (ab230358) at 1/5000 dilution

Lane 1 : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extract

Lane 2 : DDDDK-human Tet2-transfected HEK-293T whole cell lysate

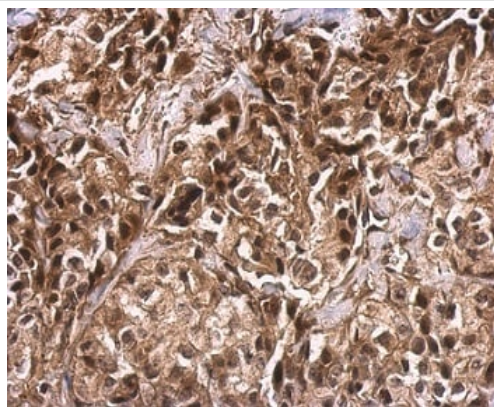
Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Predicted band size: 224 kDa

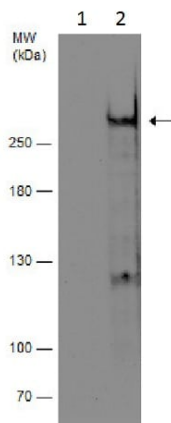
5% SDS-PAGE gel.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tet2 antibody - N-terminal (ab230358)

Paraffin-embedded human breast cancer tissue stained for Tet2 using ab230358 at 1/500 dilution in immunohistochemical analysis.

Antigen Retrieval: EDTA based buffer, pH 8.0, 15min.



Immunoprecipitation - Anti-Tet2 antibody - N-terminal
(ab230358)

Tet2 was immunoprecipitated from HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate with 5 µg ab230358. Western blot was performed from the immunoprecipitate using ab230358. Anti rabbit IgG antibody was used as secondary antibody.

Lane 1: Control IgG IP in HEK-293T whole cell lysate.

Lane 2: ab230358 IP in HEK-293T whole cell lysate.

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