

NF-E2 (C-19): sc-291

BACKGROUND

The nuclear DNA binding protein NF-E2 regulates expression of globulin genes in developing erythroid cells through interaction with upstream AP-1-like recognition sites. More specifically, NF-E2 recognizes a site containing an intact AP-1 binding motif, preceded by a G residue two base pairs upstream. NF-E2 is an obligate heterodimer composed of NF-E2 p45 and NF-E2 p18. NF-E2 p18, also known as NF-E2U or MAFK, is a ubiquitously expressed component that is related to the v-Maf oncogene. It contains a basic-leucine zipper domain that functions in DNA binding and dimerization. In addition, NF-E2 p18 may play a role in erythroid differentiation. The major component of NF-E2 is a polypeptide, designated NF-E2 p45, that belongs to the basic region-leucine zipper family of transcription factors. This subunit of NF-E2 is specifically expressed at low level in hematopoietic progenitor cells and differentiated cells of the erythroid, megakaryocyte and mast cell lineages.

CHROMOSOMAL LOCATION

Genetic locus: NFE2 (human) mapping to 12q13.13; Nfe2 (mouse) mapping to 15 F3.

SOURCE

NF-E2 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of NF-E2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-291 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-291 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NF-E2 (C-19) is recommended for detection of NF-E2 p45 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NF-E2 (C-19) is also recommended for detection of NF-E2 p45 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NF-E2 siRNA (h): sc-36046, NF-E2 p18 siRNA (m): sc-38104, NF-E2 shRNA Plasmid (h): sc-36046-SH, NF-E2 p18 shRNA Plasmid (m): sc-38104-SH, NF-E2 shRNA (h) Lentiviral Particles: sc-36046-V and NF-E2 p18 shRNA (m) Lentiviral Particles: sc-38104-V.

NF-E2 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

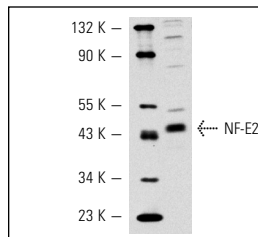
Molecular Weight of NF-E2: 45 kDa.

Positive Controls: K-562 nuclear extract: sc-2130 or HeLa whole cell lysate: sc-2200.

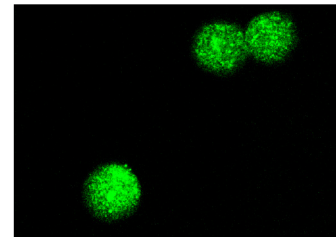
STORAGE

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

DATA



NF-E2 (C-19): sc-291. Western blot analysis of NF-E2 expression in K-562 nuclear extract.



NF-E2 (C-19): sc-291. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Sawado, T., et al. 2001. Activation of β -major globin gene transcription is associated with recruitment of NF-E2 to the β -globin LCR and gene promoter. *Proc. Natl. Acad. Sci. USA* 98: 10226-10231.
2. Lin, I.J., et al. 2009. Calpeptin increases the activity of upstream stimulatory factor and induces high level globin gene expression in erythroid cells. *J. Biol. Chem.* 284: 20130-20135.
3. Motohashi, H., et al. 2010. NF-E2 domination over Nrf2 promotes ROS accumulation and megakaryocytic maturation. *Blood* 115: 677-686.
4. Zhou, Z., et al. 2010. USF and NF-E2 cooperate to regulate the recruitment and activity of RNA polymerase II in the β -globin gene locus. *J. Biol. Chem.* 285: 15894-15905.
5. Anguita, E., et al. 2010. GFI1B controls its own expression binding to multiple sites. *Haematologica* 95: 36-46.
6. Perdomo, J., et al. 2010. A monopartite sequence is essential for p45 NF-E2 nuclear translocation, transcriptional activity and platelet production. *J. Thromb. Haemost.* 8: 2542-2553.
7. Woon Kim, Y., et al. 2011. The distinctive roles of erythroid specific activator GATA-1 and NF-E2 in transcription of the human fetal γ -globin genes. *Nucleic Acids Res.* 39: 6944-6955.
8. Motohashi, H., et al. 2011. Molecular determinants for small Maf protein control of platelet production. *Mol. Cell. Biol.* 31: 151-162.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **NF-E2 (D-6): sc-365083** or **NF-E2 (G-2): sc-514429**, our highly recommended monoclonal alternatives to NF-E2 (C-19).