

E2A (N-649): sc-763

BACKGROUND

Transcription factor 3 (E47, E12, E2A immunoglobulin enhancer binding factors E12/E47, E2A, ITF1, TCF3) influences gene expression during B cell maturation. Differentiation of myogenic cells is regulated by multiple positively and negatively acting factors. One well characterized family of helix-loop-helix (HLH) proteins known to play an important role in the regulation of muscle cell development includes Myo D, myogenin, Myf-5 and Myf-6 (also designated MRF-4 or herculin). Myo D transcription factors form heterodimers with products of a more widely expressed family of bHLH genes, the E family, which consists of at least three distinct genes: E2A, IF2 and HEB. Myo D-E heterodimers bind avidly to consensus (CANNTG) E box target sites that are functionally important elements in the upstream regulatory sequences of many muscle-specific terminal differentiation genes. Both homo- and hetero-oligomers of these proteins are able to distinguish very closely related E box proteins and are believed to play important roles in lineage-specific gene expression.

CHROMOSOMAL LOCATION

Genetic locus: TCF3 (human) mapping to 19p13.3; Tcf3 (mouse) mapping to 10 C1.

SOURCE

E2A (N-649) is a rabbit polyclonal antibody raised against amino acids 1-649 of E2A of human 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-763 X, 200 µg/0.1 ml.

APPLICATIONS

E2A (N-649) is recommended for detection of E2A isoforms E12 and E47 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for E2A siRNA (h): sc-35245, E2A siRNA (m): sc-35246, E2A shRNA Plasmid (h): sc-35245-SH, E2A shRNA Plasmid (m): sc-35246-SH, E2A shRNA (h) Lentiviral Particles: sc-35245-V and E2A shRNA (m) Lentiviral Particles: sc-35246-V.

E2A (N-649) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of E2A: 67 kDa.

Molecular Weight (observed) of E2A: 63-92 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

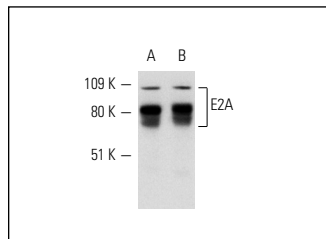
RESEARCH USE

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

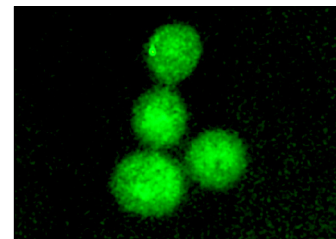
STORAGE

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

DATA



E2A (N-649): sc-763. Western blot analysis of E2A expression in Jurkat (A) and K-562 (B) whole cell lysates.



E2A (N-649): sc-763. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear staining.

SELECT PRODUCT CITATIONS

- Rutherford, M.N., et al. 1998. Restricted expression of E2A protein in primary human tissue correlates with proliferation and differentiation. *Am. J. Pathol.* 153: 165-173.
- Scheffer, D., et al. 2007. The α 1 subunit of nicotinic acetylcholine receptors in the inner ear: transcriptional regulation by ATOH1 and co-expression with the γ subunit in hair cells. *J. Neurochem.* 6: 2651-264.
- Mandal, M., et al. 2009. Ras orchestrates exit from the cell cycle and light-chain recombination during early B cell development. *Nat. Immunol.* 10: 1110-1117.
- Dey, S., et al. 2010. The TAL1/SCL transcription factor regulates cell cycle progression and proliferation in differentiating murine bone marrow monocyte precursors. *Mol. Cell. Biol.* 30: 2181-2192.
- Anguita, E., et al. 2010. GFI1B controls its own expression binding to multiple sites. *Haematologica* 95: 36-46.
- Dufresne, M., et al. 2011. Id3 modulates cellular localization of β HLH Ptf1-p48 protein. *Int. J. Cancer* 129: 295-306.
- Cakouros, D., et al. 2012. Twist-1 induces Ezh2 recruitment regulating histone methylation along the Ink4A/Arf locus in mesenchymal stem cells. *Mol. Cell. Biol.* 32: 1433-1441.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **E2A (G-2): sc-133075** or **E2A (D-7): sc-133074**, our highly recommended monoclonal alternatives to E2A (N-649). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **E2A (G-2): sc-133075**.