

FOG-2 (H-5): sc-398011

BACKGROUND

The FOG family of transcriptional cofactors, including FOG (friend of GATA-1) and FOG-2, are zinc finger proteins that interact with the GATA family of transcriptional regulators. FOG/GATA-1 complexes are required for erythroid and megakaryocyte maturation, and they promote differentiation during embryonic development. These complexes involve the association between multiple zinc fingers on the FOG proteins and the N-terminal zinc finger of GATA proteins. While FOG cooperatively regulates GATA-1 induced transcription, FOG-2 is able to both positively and negatively influence GATA mediated transcription. FOG-2 is predominantly expressed in heart, neurons and gonads, and it preferentially participates in the regulation of GATA-3, GATA-4 and GATA-6. In cardiomyocytes and fibroblasts, FOG-2 inhibits GATA-4 transcriptional activity, yet FOG-2 restores GATA-1 mediated transcription in erythroid cultures deficient in FOG, suggesting that the observed effects of FOG-2 are context specific and vary between cellular systems.

REFERENCES

1. Tsang, A.P., et al. 1997. FOG, a multitype zinc finger protein, acts as a cofactor for transcription factor GATA-1 in erythroid and megakaryocytic differentiation. *Cell* 90: 109-119.
2. Tsang, A.P., et al. 1998. Failure of megakaryopoiesis and arrested erythropoiesis in mice lacking the GATA-1 transcriptional cofactor FOG. *Genes Dev.* 12: 1176-1188.
3. Tevosian, S.G., et al. 1999. FOG-2: A novel GATA-family cofactor related to multitype zinc-finger proteins friend of GATA-1 and U-shaped. *Proc. Natl. Acad. Sci. USA* 96: 950-955.
4. Svensson, E.C., et al. 1999. Molecular cloning of FOG-2: a modulator of transcription factor GATA-4 in cardiomyocytes. *Proc. Natl. Acad. Sci. USA* 96: 956-961.

CHROMOSOMAL LOCATION

Genetic locus: ZFPM2 (human) mapping to 8q23.1; Zfpm2 (mouse) mapping to 15 B3.1.

SOURCE

FOG-2 (H-5) is a mouse monoclonal antibody raised against amino acids 880-1126 mapping at the C-terminus of FOG-2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-398011 X, 200 µg/0.1 ml.

FOG-2 (H-5) is available conjugated to agarose (sc-398011 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398011 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398011 PE), fluorescein (sc-398011 FITC), Alexa Fluor[®] 488 (sc-398011 AF488), Alexa Fluor[®] 546 (sc-398011 AF546), Alexa Fluor[®] 594 (sc-398011 AF594) or Alexa Fluor[®] 647 (sc-398011 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398011 AF680) or Alexa Fluor[®] 790 (sc-398011 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FOG-2 (H-5) is recommended for detection of FOG-2 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).

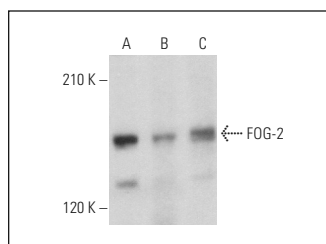
Suitable for use as control antibody for FOG-2 siRNA (h): sc-35401, FOG-2 siRNA (m): sc-35402, FOG-2 shRNA Plasmid (h): sc-35401-SH, FOG-2 shRNA Plasmid (m): sc-35402-SH, FOG-2 shRNA (h) Lentiviral Particles: sc-35401-V and FOG-2 shRNA (m) Lentiviral Particles: sc-35402-V.

FOG-2 (H-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

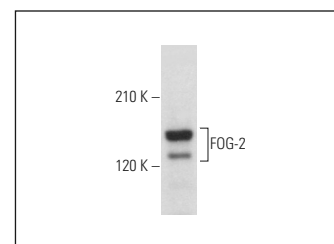
Molecular Weight of FOG-2: 166 kDa.

Positive Controls: rat lung extract: sc-2396, mouse cerebellum extract: sc-2403 or rat cerebellum extract: sc-2398.

DATA



FOG-2 (H-5): sc-398011. Western blot analysis of FOG-2 expression in mouse cerebellum (A), mouse Epididymus (B) and rat lung (C) tissue extracts.



FOG-2 (H-5): sc-398011. Western blot analysis of FOG-2 expression in rat cerebellum tissue extract.

SELECT PRODUCT CITATIONS

1. van den Bergen, J.A., et al. 2020. Analysis of variants in GATA4 and FOG2/ZFPM2 demonstrates benign contribution to 46,XY disorders of sex development. *Mol. Genet. Genomic Med.* 8: e1095.
2. Morello, F., et al. 2020. Molecular fingerprint and developmental regulation of the tegmental GABAergic and glutamatergic neurons derived from the anterior hindbrain. *Cell Rep.* 33: 108268.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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

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