

KLF16 (F-4): sc-377519

BACKGROUND

Krüppel-like factors (KLFs) comprise a family of evolutionarily conserved zinc finger-containing transcription factors with diverse regulatory functions in cell growth, proliferation, differentiation and embryogenesis. Individual members of the Sp1-like/KLF family can function either as activators or repressors, depending on which promoter they bind and which coregulators they interact with. KLF16 (Krüppel-like factor 16), also known as BTEB4, DRRF (dopamine receptor-regulating factor) or NSLP2, is a 252 amino acid protein that contains three C₂H₂-type zinc fingers and belongs to the KLF transcription factor family. Localized to the nucleus and expressed at high levels in brain, KLF16 functions as a transcription factor that binds specifically to GT and GC boxes, displacing the transcription factors Sp1 and Sp3 and effectively modulating dopaminergic transmission in the brain.

CHROMOSOMAL LOCATION

Genetic locus: KLF16 (human) mapping to 19p13.3.

SOURCE

KLF16 (F-4) is a mouse monoclonal antibody raised against amino acids 207-252 mapping at the C-terminus of KLF16 of human 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.

KLF16 (F-4) is available conjugated to agarose (sc-377519 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377519 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377519 PE), fluorescein (sc-377519 FITC), Alexa Fluor® 488 (sc-377519 AF488), Alexa Fluor® 546 (sc-377519 AF546), Alexa Fluor® 594 (sc-377519 AF594) or Alexa Fluor® 647 (sc-377519 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377519 AF680) or Alexa Fluor® 790 (sc-377519 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

KLF16 (F-4) is recommended for detection of KLF16 of 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 KLF16 siRNA (h): sc-97813, KLF16 shRNA Plasmid (h): sc-97813-SH and KLF16 shRNA (h) Lentiviral Particles: sc-97813-V.

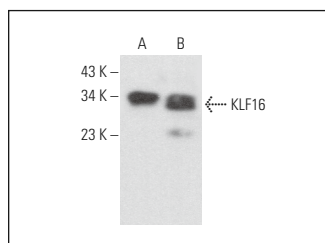
Molecular Weight of KLF16: 25 kDa.

Positive Controls: Raji whole cell lysate: sc-364236 or Jurkat whole cell lysate: sc-2204.

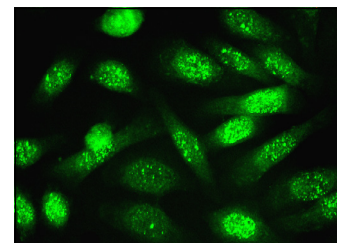
RECOMMENDED SUPPORT REAGENTS

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



KLF16 (F-4): sc-377519. Western blot analysis of KLF16 expression in Raji (A) and Jurkat (B) whole cell lysates.



KLF16 (F-4): sc-377519. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Xin, Y., et al. 2021. Knock out hepatic Krüppel-like factor 16 (KLF16) improve myocardial damage and promoted myocardial protection of myocardial ischemia-reperfusion via anti-oxidative and anti-inflammation effects by TFAM/PPARβ signal passage. *Bioengineered* 12: 10219-10231.
- Li, L., et al. 2022. Transcription factor KLF16 activates MAGT1 to regulate the tumorigenesis and progression of breast cancer. *Int. J. Mol. Med.* 50: 115.
- Man, B., et al. 2022. Berberine attenuates diabetic atherosclerosis via enhancing the interplay between KLF16 and PPARα in ApoE^{-/-} mice. *Biochem. Biophys. Res. Commun.* 624: 59-67.
- Mi, W., et al. 2022. KLF16 promotes pancreatic adenocarcinoma cell proliferation and migration by positively regulating SMAD6. *World J. Gastrointest. Oncol.* 14: 2157-2169.

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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