

FEZF1 (F-4): sc-515487

BACKGROUND

Olfactory sensory neurons contain olfactory receptors, which are G protein-coupled receptor proteins that localize to the cilia and display affinity for and bind to a variety of odor molecules. Olfactory neurons send their axons from the olfactory epithelium to the olfactory bulb, which is covered by the CNS basal lamina. FEZF1 (Fez family zinc finger protein 1), also known as forebrain embryonic zinc finger and zinc finger protein 312B, is a 475 amino acid nuclear protein that is expressed in the olfactory epithelium and hypothalamus of mice. In FEZF1-deficient mice, axons of olfactory neurons do not reach the olfactory bulb, suggesting that FEZF1 is required for the penetration of olfactory axons through the basal lamina before innervation of the olfactory bulb. When FEZF1 translocates to the nucleus, it induces KRAS overexpression, resulting in activation of ERK-signaling. Overexpression of FEZF1 leads to accelerated proliferation in cultured cells and increased tumor mass in mice. There are three isoforms of FEZF1 that are produced as a result of alternative splicing events.

REFERENCES

- Matsuo-Takasaki, M., et al. 2000. Cloning and expression of a novel zinc finger gene, *Fez*, transcribed in the forebrain of *Xenopus* and mouse embryos. *Mech. Dev.* 93: 201-204.
- Hirata, T., et al. 2006. Zinc-finger gene *Fez* in the olfactory sensory neurons regulates development of the olfactory bulb non-cell-autonomously. *Development* 133: 1433-1443.
- Hirata, T., et al. 2006. Zinc-finger genes *Fez* and *Fez-like* function in the establishment of diencephalon subdivisions. *Development* 133: 3993-4004.
- Kurrasch, D.M., et al. 2007. The neonatal ventromedial hypothalamus transcriptome reveals novel markers with spatially distinct patterning. *J. Neurosci.* 27: 13624-13634.

CHROMOSOMAL LOCATION

Genetic locus: FEZF1 (human) mapping to 7q31.32.

SOURCE

FEZF1 (F-4) is a mouse monoclonal antibody raised against amino acids 74-262 mapping within an internal region of FEZF1 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.

FEZF1 (F-4) is available conjugated to agarose (sc-515487 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515487 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515487 PE), fluorescein (sc-515487 FITC), Alexa Fluor® 488 (sc-515487 AF488), Alexa Fluor® 546 (sc-515487 AF546), Alexa Fluor® 594 (sc-515487 AF594) or Alexa Fluor® 647 (sc-515487 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515487 AF680) or Alexa Fluor® 790 (sc-515487 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FEZF1 (F-4) is recommended for detection of FEZF1 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 FEZF1 siRNA (h): sc-89824, FEZF1 shRNA Plasmid (h): sc-89824-SH and FEZF1 shRNA (h) Lentiviral Particles: sc-89824-V.

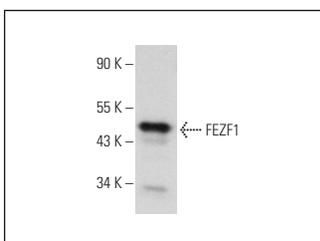
Molecular Weight of FEZF1: 52 kDa.

Positive Controls: SNU-16 whole cell lysate.

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



FEZF1 (F-4): sc-515487. Western blot analysis of FEZF1 expression in SNU-16 whole cell lysate.

SELECT PRODUCT CITATIONS

- García-García, L., et al. 2021. The transcription factor FEZF1, a direct target of EWSR1-FLI1 in Ewing sarcoma cells, regulates the expression of neural-specific genes. *Cancers* 13: 5668.

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.