

Punc (F-3): sc-514023



The Power to Question

BACKGROUND

Punc (putative neuronal cell adhesion molecule), also known as IGDC3 (immunoglobulin superfamily DCC subclass member 3), is a 814 amino acid single-pass type I membrane protein that belongs to the immunoglobulin superfamily and the DCC family. The Punc protein exhibits a novel configuration of four Ig-like C2-type (immunoglobulin-like) domains and two fibronectin-type III repeats, and resembles proteins involved in axon guidance. Punc is highly expressed in the nervous system and limb buds of the developing mouse embryo, however, at midgestation expression levels of Punc decrease sharply. The Punc gene is conserved in chimpanzee, canine, bovine, mouse, rat, avian and zebrafish, and maps to human chromosome 15q22.31. The Punc gene is located distal to the critical region for Stereocilin, also known as DFNB16 (deafness autosomal recessive type 16), which is a nonsyndromic recessive deafness locus that had been mapped to 15q22.31.

REFERENCES

1. Campbell, D.A., et al. 1997. A new locus for non-syndromal, autosomal recessive, sensorineural hearing loss (DFNB16) maps to human chromosome 15q21-q22. *J. Med. Genet.* 34: 1015-1017.
2. Salbaum, J.M. 1998. Punc, a novel mouse gene of the immunoglobulin superfamily, is expressed predominantly in the developing nervous system. *Mech. Dev.* 71: 201-204.
3. Villamar, M., et al. 1999. Deafness locus DFNB16 is located on chromosome 15q13-q21 within a 5-cM interval flanked by markers D15S994 and D15S132. *Am. J. Hum. Genet.* 64: 1238-1241.

CHROMOSOMAL LOCATION

Genetic locus: IGDC3 (human) mapping to 15q22.31; *Igdc3* (mouse) mapping to 9 C.

SOURCE

Punc (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 332-349 within an extracellular domain of Punc 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.

Punc (F-3) is available conjugated to agarose (sc-514023 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514023 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514023 PE), fluorescein (sc-514023 FITC), Alexa Fluor® 488 (sc-514023 AF488), Alexa Fluor® 546 (sc-514023 AF546), Alexa Fluor® 594 (sc-514023 AF594) or Alexa Fluor® 647 (sc-514023 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514023 AF680) or Alexa Fluor® 790 (sc-514023 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514023 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Punc (F-3) is recommended for detection of Punc 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 Punc siRNA (h): sc-90198, Punc siRNA (m): sc-152590, Punc shRNA Plasmid (h): sc-90198-SH, Punc shRNA Plasmid (m): sc-152590-SH, Punc shRNA (h) Lentiviral Particles: sc-90198-V and Punc shRNA (m) Lentiviral Particles: sc-152590-V.

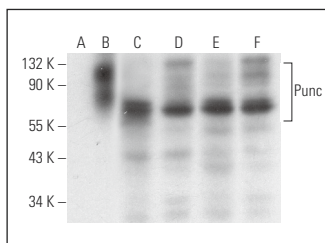
Molecular Weight of Punc: 87 kDa.

Positive Controls: Punc (h): 293T Lysate: sc-115923, LNCaP cell lysate: sc-2231 or MCF7 whole cell lysate: sc-2206.

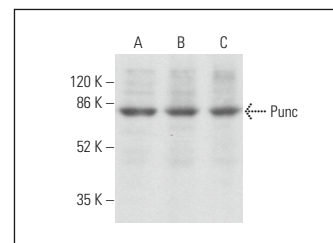
RECOMMENDED SUPPORT REAGENTS

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



Punc (F-3): sc-514023. Western blot analysis of Punc expression in non-transfected 293T: sc-117752 (A), human Punc transfected 293T: sc-115923 (B), Hep G2 (C), PANC-1 (D), LNCaP (E) and MCF7 (F) whole cell lysates.



Punc (F-3): sc-514023. Western blot analysis of Punc expression in F9 (A), C2C12 (B) and A-10 (C) whole cell lysates.

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.