SANTA CRUZ BIOTECHNOLOGY, INC.

connexin 47 (391CT6.4.3): sc-517325

BACKGROUND

Gap junctions are formed by a hexameric group of proteins called connexins for the transport of low molecular weight proteins. Connexins are present in all metazoan organisms, where they serve diverse functions, ranging from control of cell growth and differentiation to electric conduction in excitable tissues. Several mammalian cells with malignant phenotypes exhibit decreased connexin expression and gap junction communication. Connexin 47 is primarily expressed in the oligodendrocytes of highly myelinated CNS tissues and in a few calcium-binding protein S-100 β subunit-positive cells, but not in neurons or peripheral sciatic nerve. Connexin 47 is co-localized in many gap junction plaques on oligodendrocyte somata, particularly in gray matter.

REFERENCES

1. Odermatt, B., et al. 2003. Connexin 47 (Cx47)-deficient mice with enhanced green fluorescent protein reporter gene reveal predominant oligodendrocytic expression of Cx47 and display vacuolized myelin in the CNS. J. Neurosci. 23: 4549-4559.
2. Kleopa, K.A., et al. 2004. Unique distributions of the gap junction proteins connexin 29, connexin 32, and connexin 47 in oligodendrocytes. Glia 47: 346-357.
3. Kamasawa, N., et al. 2005. Connexin 47 and connexin 32 in gap junctions of oligodendrocyte somata, myelin sheaths, paranodal loops and Schmidt-Lanterman incisures: implications for ionic homeostasis and potassium siphoning. Neuroscience 136: 65-86.

CHROMOSOMAL LOCATION

Genetic locus: GJC2 (human) mapping to 1q42.13.

SOURCE

connexin 47 (391CT6.4.3) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 32-61 in the N-terminal region of connexin 47 of human origin.

PRODUCT

Each vial contains 100 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

connexin 47 (391CT6.4.3) is recommended for detection of connexin 47 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for connexin 47 siRNA (h): sc-105232, connexin 47 shRNA Plasmid (h): sc-105232-SH and connexin 47 shRNA (h) Lentiviral Particles: sc-105232-V.

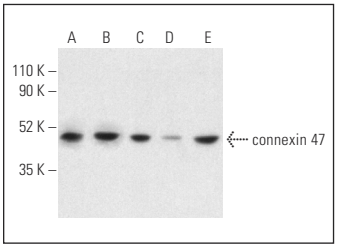
Molecular Weight of connexin 47: 47 kDa.

Positive Controls: HT-29 whole cell lysate: sc-364232, A549 cell lysate: sc-2413 or U-2 OS cell lysate: sc-2295.

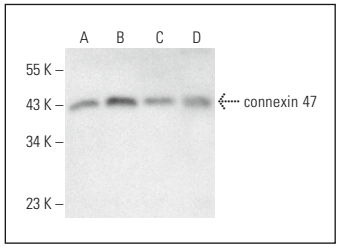
STORAGE

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

DATA



connexin 47 (391CT6.4.3): sc-517325. Western blot analysis of connexin 47 expression in A549 (**A**), Jurkat (**B**), U-2 OS (**C**), U-87 MG (**D**) and HT-29 (**E**) whole cell lysates. Detection reagent used: anti-mouse IgM-HRP.



connexin 47 (391CT6.4.3): sc-517325. Western blot analysis of connexin 47 expression in A549 (**A**), WiDr (**B**) and HT-29 (**C**) whole cell lysates and human hypothalamus tissue extract (**D**).

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.