

# connexin 36 (C-20): sc-14904

## BACKGROUND

The connexin family of proteins form hexameric complexes called "connexons" that facilitate movement of low molecular weight proteins between cells via gap junctions. Connexin proteins share a common topology of four transmembrane  $\alpha$ -helical domains, two extracellular loops, a cytoplasmic loop and cytoplasmic N- and C-termini. Many of the key functional differences arise from specific amino-acid substitutions in the most highly conserved domains, the transmembrane and extracellular regions. Each of the approximately 20 connexin isoforms produces channels with distinct permeabilities and electrical and chemical sensitivities; therefore, one connexin usually cannot fully substitute for another. Consequently, a wide variety of malignant phenotypes associate with decreased connexin expression and gap junction communication, dependent on the particular connexin that is affected. For instance, global ischemia induces connexin 36 expression, implying a role for this connexin in inter-neuronal survival.

## CHROMOSOMAL LOCATION

Genetic locus: GJD2 (human) mapping to 15q14; Gjd2 (mouse) mapping to 2 E4.

## SOURCE

connexin 36 (C-20) is available as either goat (sc-14904) or rabbit (sc-14904-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of connexin 36 of human origin.

## PRODUCT

Each vial contains either 100  $\mu$ g (sc-14904) or 200  $\mu$ g (sc-14904-R) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14904 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

connexin 36 (C-20) is recommended for detection of connexin 36 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

connexin 36 (C-20) is also recommended for detection of connexin 36 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for connexin 36 siRNA (h): sc-35089, connexin 36 siRNA (m): sc-35090, connexin 36 shRNA Plasmid (h): sc-35089-SH, connexin 36 shRNA Plasmid (m): sc-35090-SH, connexin 36 shRNA (h) Lentiviral Particles: sc-35089-V and connexin 36 shRNA (m) Lentiviral Particles: sc-35090-V.

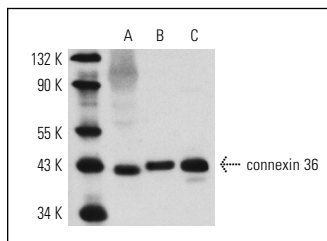
Molecular Weight of connexin 36: 42 kDa.

Positive Controls: mouse brain extract: sc-2253, PC-12 cell lysate: sc-2250 or rat brain extract: sc-2392.

## STORAGE

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

## DATA



connexin 36 (C-20): sc-14904. Western blot analysis of connexin 36 expression in PC-12 whole cell lysate (A) and rat (B) and mouse (C) brain tissue extracts.

## SELECT PRODUCT CITATIONS

1. Tang, V.W. 2006. Proteomic and bioinformatic analysis of epithelial tight junction reveals an unexpected cluster of synaptic molecules. *Biol. Direct.* 1: 37.
2. Collignon, F., et al. 2006. Altered expression of connexin subtypes in mesial temporal lobe epilepsy in humans. *J. Neurosurg.* 105: 77-87.
3. Westberg, L., et al. 2009. Colocalization of connexin 36 and corticotropin-releasing hormone in the mouse brain. *BMC Neurosci.* 10: 41.
4. Lemcke, H., et al. 2013. Neuronal differentiation requires a biphasic modulation of gap junctional intercellular communication caused by dynamic changes of connexin43 expression. *Eur. J. Neurosci.* 38: 2218-2228.
5. Frinchi, M., et al. 2013. Connexin36 (Cx36) expression and protein detection in the mouse carotid body and myenteric plexus. *Acta Histochem.* 115: 252-256.
6. Yang, K.C., et al. 2013. Investigating the suspension culture on aggregation and function of mouse pancreatic  $\beta$ -cells. *J. Biomed. Mater. Res. A* 101: 2273-2282.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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