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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic)

# GABA<sub>A</sub> R $\beta$ 3 (h2): 293T Lysate: sc-173318

## BACKGROUND

GAD-65 and GAD-67, glutamate decarboxylases, function to catalyze the production of GABA ( $\gamma$ -aminobutyric acid). In the central nervous system GABA functions as the main inhibitory transmitter by increasing a Cl<sup>-</sup> conductance that inhibits neuronal firing. GABA has been shown to activate both ionotropic (GABA<sub>A</sub>) and metabotropic (GABA<sub>B</sub>) receptors as well as a third class of receptors called GABA<sub>C</sub>. Both GABA<sub>A</sub> and GABA<sub>C</sub> are ligand-gated ion channels, however, they are structurally and functionally distinct. Members of the GABA<sub>A</sub> receptor family include GABA<sub>A</sub> R $\alpha$ 1-6, GABA<sub>A</sub> R $\beta$ 1-3, GABA<sub>A</sub> R $\gamma$ 1-3, GABA<sub>A</sub> R $\delta$ , GABA<sub>A</sub> R $\epsilon$ , GABA<sub>A</sub> R $\rho$ 1 and GABA<sub>A</sub> R $\rho$ 2. The GABA<sub>B</sub> family is composed of GABA<sub>B</sub> R1 $\alpha$  and GABA<sub>B</sub> R1 $\beta$ . GABA transporters have also been identified and include GABA T-1, GABA T-2 and GABA T-3 (also designated GAT-1, -2 and -3). The GABA transporters function to terminate GABA action.

## REFERENCES

1. Nelson, H., et al. 1990. Cloning of the human brain GABA transporter. FEBS Lett. 269: 181-184.
2. Cherubini, E., et al. 1991. GABA: an excitatory transmitter in early postnatal life. Trends Neurosci. 14: 515-519.
3. Borden, L.A., et al. 1992. Molecular heterogeneity of the  $\gamma$ -aminobutyric acid (GABA) transport system. Cloning of two novel high affinity GABA transporters from rat brain. J. Biol. Chem. 267: 21098-21104.
4. Dirx, R., Jr., et al. 1995. Targeting of the 67 kDa isoform of glutamic acid decarboxylase to intracellular organelles is mediated by its interaction with the NH<sub>2</sub>-terminal region of the 65 kDa isoform of glutamic acid decarboxylase. J. Biol. Chem. 270: 2241-2246.
5. Lukasiewicz, P.D. 1996. GABA<sub>C</sub> receptors in the vertebrate retina. Mol. Neurobiol. 12: 181-194.
6. Kaupmann, K., et al. 1997. Expression cloning of GABA<sub>B</sub> receptors uncovers similarity to metabotropic glutamate receptors. Nature 386: 239-246.
7. Korpi, E.R., et al. 1997. GABA<sub>A</sub> receptor subtypes: clinical efficiency and selectivity of benzodiazepine site ligands. Ann. Med. 29: 275-282.

## CHROMOSOMAL LOCATION

Genetic locus: GABRB3 (human) mapping to 15q12.

## PRODUCT

GABA<sub>A</sub> R $\beta$ 3 (h2): 293T Lysate represents a lysate of human GABA<sub>A</sub> R $\beta$ 3 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

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

## APPLICATIONS

GABA<sub>A</sub> R $\beta$ 3 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive GABA<sub>A</sub> R $\beta$ 3 antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## RESEARCH USE

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