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Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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- Expressversand

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# NDUFV2 (h): 293T Lysate: sc-117341

## BACKGROUND

Located in the mitochondrial inner membrane, mitochondrial complex I is the first and largest enzyme in the electron transport chain of oxidative phosphorylation. By oxidizing NADH that is produced in the Krebs cycle, this complex utilizes the two electrons to reduce ubiquinone to ubiquinol, thereby initiating the passage of electrons to successive complexes and ultimately leading to the reduction of oxygen to water. Mitochondrial complex I consists of over 40 subunits and is of considerable clinical interest since defects in any one of the subunits can lead to various myopathies and neuropathies. As a sub-unit of mitochondrial complex I, NDUFV2 (NADH dehydrogenase [ubiquinone] flavoprotein 2), also designated NADH-ubiquinone oxidoreductase 24 kDa subunit, is a 249 amino acid protein that is believed to be required for catalytic activity. Several studies suggest that polymorphisms of the gene encoding NDUFV2 may be a genetic risk factor for bipolar disorder and schizophrenia.

## REFERENCES

- Pilkington, S.J. and Walker, J.E. 1989. Mitochondrial NADH-ubiquinone reductase: complementary DNA sequences of import precursors of the bovine and human 24 kDa subunit. *Biochemistry* 28: 3257-3264.
- Washizuka, S., Kakiuchi, C., Mori, K., Kunugi, H., Tajima, O., Akiyama, T., Nanko, S. and Kato, T. 2003. Association of mitochondrial complex I subunit gene NDUFV2 at 18p11 with bipolar disorder. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 120B: 72-78.
- Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 600532. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Washizuka, S., Kametani, M., Sasaki, T., Tochigi, M., Umekage, T., Kohda, K. and Kato, T. 2006. Association of mitochondrial complex I subunit gene NDUFV2 at 18p11 with schizophrenia in the Japanese population. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 141B: 301-304.
- Ben-Shachar, D. and Karry, R. 2007. Sp1 expression is disrupted in schizophrenia; a possible mechanism for the abnormal expression of mitochondrial complex I genes, NDUFV1 and NDUFV2. *PLoS ONE* 2: e817.
- Xu, C., Li, P.P., Kennedy, J.L., Green, M., Hughes, B., Cooke, R.G., Parikh, S.V. and Warsh, J.J. 2008. Further support for association of the mitochondrial complex I subunit gene NDUFV2 with bipolar disorder. *Bipolar Disord.* 10: 105-110.
- Washizuka, S., Iwamoto, K., Kakiuchi, C., Bundo, M. and Kato, T. 2008. Expression of mitochondrial complex I subunit gene NDUFV2 in the lymphoblastoid cells derived from patients with bipolar disorder and schizophrenia. *Neurosci. Res.* 63: 199-204.
- Ben-Shachar, D. and Karry, R. 2008. Neuroanatomical pattern of mitochondrial complex I pathology varies between schizophrenia, bipolar disorder and major depression. *PLoS ONE* 3: e3676.
- Zhang, J., Li, X., Wang, Y., Ji, J., Yang, F., Feng, G., Wan, P., Lindpaintner, K., He, L. and He, G. 2009. Association study on the mitochondrial gene NDUFV2 and bipolar disorder in the Chinese Han population. *J. Neural Transm.* 116: 357-361.

## CHROMOSOMAL LOCATION

Genetic locus: NDUFV2 (human) mapping to 18p11.22.

## PRODUCT

NDUFV2 (h): 293T Lysate represents a lysate of human NDUFV2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

NDUFV2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NDUFV2 antibodies. Recommended use: 10-20 µl per lane.

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

## 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.

## 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) for detailed protocols and support products.