

## Rabbit antibody to beta synuclein (C-terminal domain): IgG

<b>Catalogue No.:</b>	R-1683-500
<b>Description:</b>	Beta-synuclein is a soluble cytoplasmic protein associated with synaptic vesicles and a member of the synuclein family. Mutations in alpha-synuclein cause early onset Parkinson's disease. Expression of beta synuclein may modulate alpha-synuclein aggregation found in Parkinson's disease.
<b>Batch No.:</b>	See product label
<b>Unit size:</b>	500 ug
<b>Antigen:</b>	A synthetic peptide (AQEAAEEPLIEPLME-C) corresponding to human $\beta$ -synuclein [99-113] in the C-terminal domain conjugated via additional C-terminal Cys to Diphtheria toxoid.
<b>Antibody Type:</b>	Polyclonal
<b>Applications:</b>	WB and IHC. A dilution of 1:500 to 1:1,000 is recommended for Western blot. -beta-synuclein is a soluble protein of 134 amino acids and detected with 17 kDa mobility by western blotting. By IHC the antibody detects synaptic sites in human brain formaldehyde-treated frozen tissue. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
<b>Specificity:</b>	Confirmed by WB using soluble mouse and human brain extracts, reactivity for major product diminished by peptide absorption. Does not detect alpha-synuclein as tested with recombinant protein and does not react with Lewy bodies in human Dementia with Lewy Bodies or Parkinson's disease brain tissue sections.
<b>Species Against:</b>	Human and mouse $\beta$ -synuclein are highly conserved, so cross-reactivity with other species is expected.
<b>Form:</b>	Lyophilized from PBS, pH 7.4. Contains no preservative.
<b>Reconstitution:</b>	Reconstitute in 500 uL of sterile water. Centrifuge to remove any insoluble material.
<b>Storage:</b>	Lyophilized at 2-8C. After reconstitution, store at -20C in undiluted aliquots for up to 6 months. The antibody may be stored short term at 2-2-8C with an appropriate antibacterial agent. Avoid freeze-thaw cycles.
<b>Expiry Date:</b>	12 months after purchase
<b>References:</b>	<p>Culvenor, J.G., McLean, C.A., Cutt, S., Campbell, B.C.V., Maher, F., Jäkälä, P., Hartmann, T., Beyreuther, K., Masters, C.M., and Li, Q.-X. (1999) Non-A<math>\beta</math> component of Alzheimer's disease amyloid (NAC) revisited: NAC and <math>\beta</math>-synuclein are not associated with A<math>\beta</math> amyloid. Am. J. Path. 155, 1173-1181.</p> <p>Culvenor, J.G., Rietze, R.L., Bartlett, P.F., Masters, C.L., and Li, Q.-X. (2002) Oligodendrocytes from neural stem cells express <math>\beta</math>-synuclein: Increased numbers from Presenilin 1 deficient mice. NeuroReport 13, 1305-1308.</p> <p>Li, Q.X., Campbell, B.C.V., McLean, C.A., Thyagarajan, D., Gai, W.P., Kapsa, R.M., Beyreuther, K., Masters, C.L., and Culvenor, J.G. (2002) Platelet <math>\beta</math>- and <math>\gamma</math>-synucleins in Parkinson's disease and normal control subjects. Journal of Alzheimer's Disease 4, 309-315.</p>

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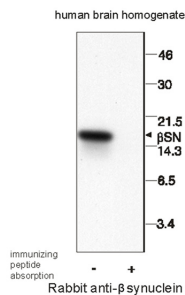
FOR RESEARCH USE ONLY

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Quilty, M.C., Gai, W.-P., Pountney, D.L., West, A.K., and Vickers, J.C. (2003) Localization of alpha, beta, and gamma synuclein during neuronal development and alterations associated with the neuronal response to axonal trauma. *Exp Neurol* 182, 195-207.

George, S. Mok, S.S., Nurjono, M., Ayton, S., Finkelstein, D.I., Masters, C.L., Li, Q.-X. and Culvenor, J.G. (2010)  $\beta$ -Synuclein transgenic mice reveal compensatory increases in Parkinson's Disease-associated proteins DJ-1 and Parkin and have enhanced  $\beta$ -synuclein and PINK1 levels after rotenone treatment. *J. Mol. Neurosci.* 42, 243-254.

Ia, K.K., Jeschke, G.R., Deng, Y., Kamaruddin, M.A., Williamson, N.A., Scanlon, D.B., CULVENOR, J.G., Hossain, M.I., Purcell, A.W., Liu, S., Zhu, H.J., Catimel, B., Turk, B.E. and Cheng, H.C. (2011) Defining the substrate specificity determinants recognized by the active site of C-Terminal Src Kinase-Homologous Kinase (CHK) and identification of beta Synuclein as a potential CHK physiological substrate. *Biochemistry*, 50, 6667-6677



Western Immunoblotting of human  $\beta$ -synuclein protein in human brain homogenate, 10 ug protein per lane. Crude anti- $\beta$ -synuclein ab (Catalog Number R-1683-100) used at 1:1000. Peptide absorption reduced antibody reactivity for expected  $\beta$ -synuclein band of 17 kDa.

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