

Datasheet for ABIN361502

anti-Tyrosine Hydroxylase antibody (pSer31)**2** Images**5** Publications[Go to Product page](#)

Overview

Quantity:	100 µL
Target:	Tyrosine Hydroxylase (TH)
Binding Specificity:	pSer31
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Tyrosine Hydroxylase antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Immunogen:	Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser31 conjugated to KLH
Specificity:	Specific for the ~60k tyrosine hydroxylase protein phosphorylated at Ser31.
Cross-Reactivity:	Mouse (Murine), Rat (Rattus)
Predicted Reactivity:	non-human primate
Purification:	Antigen Affinity Purified from Pooled Serum

Target Details

Target:	Tyrosine Hydroxylase (TH)
Alternative Name:	Tyrosine Hydroxylase (TH Products)

Target Details

Background:	Tyrosine hydroxylase (TH) is the rate-limiting enzyme in the synthesis of the catecholamines dopamine and norepinephrine. TH antibodies can therefore be used as markers for dopaminergic and noradrenergic neurons in a variety of applications including depression, schizophrenia, Parkinson's disease and drug abuse (Kish et al., 2001, Zhu et al., 2000, Zhu et al., 1999). TH antibodies can also be used to explore basic mechanisms of dopamine and norepinephrine signaling (Witkovsky et al., 2000, Salvatore et al., 2001, Dunkley et al., 2004). The activity of TH is also regulated by phosphorylation (Haycock et al., 1982, Haycock et al., 1992, Jedynak et al., 2002). Phospho-specific antibodies for the phosphorylation sites on TH can be used to great effect in studying this regulation and in identifying the cells in which TH phosphorylation occurs. Anti-Phospho Ser31 Tyrosine Hydroxylase Western blot of PC-12 cells incubated in the absence (Control) and presence of okadaic acid (OA, 1 μ M for 60 min) showing specific immunolabeling of the ~60k TH phosphorylated at Ser31.
Molecular Weight:	'60 kDa
Gene ID:	25085
UniProt:	P04177
Pathways:	Dopaminergic Neurogenesis , Response to Water Deprivation , Sensory Perception of Sound , Carbohydrate Homeostasis , Feeding Behaviour

Application Details

Application Notes:	Recommended Dilution: WB: 1:1000 IF (frozen sections, Witkovsky et al., 2000): 1:1000 IHC (frozen sections, Witkovsky et al., 2000): 1:1000 Quality Control: Western blots performed on each lot.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 μ L in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 μ g per ml BSA and 50 % glycerol.
Storage:	-20 $^{\circ}$ C

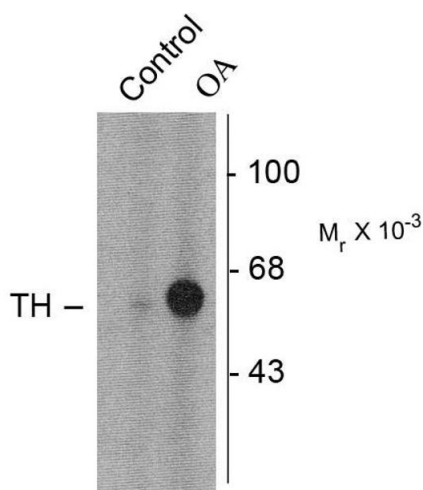
Publications

Product cited in:	Sun, Wei, Xiong, Wang, Xie, Wang, Yang, Wang, Lu, Liu, Wang: "Synaptic released zinc promotes tau hyperphosphorylation by inhibition of protein phosphatase 2A (PP2A)." in: The Journal of
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biological chemistry, Vol. 287, Issue 14, pp. 11174-82, (2012) ([PubMed](#)).

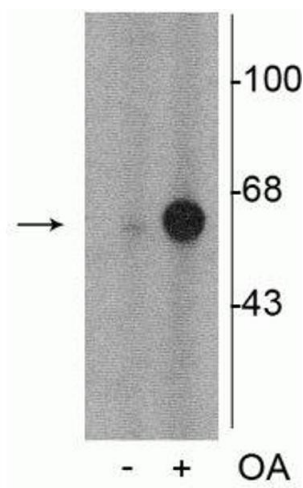
Chen, Xiong, Kong, Qu, Wang, Chen, Wang, Zhu: "Neuroglobin attenuates Alzheimer-like tau hyperphosphorylation by activating Akt signaling." in: **Journal of neurochemistry**, Vol. 120, Issue 1, pp. 157-64, (2011) ([PubMed](#)).

Validation report #103692 for Proximity Ligation Assay (PLA)



Western Blotting

Image 1. Western blots of PC-12 cells incubated in the absence (Control) and presence of okadaic acid (OA, 1 μ M for 60 min) showing specific immunolabeling of the ~60k TH phosphorylated at Ser31.



Western Blotting

Image 2. Western blot of PC-12 cell lysate incubated in the absence (-) and presence (+) of okadaic acid (OA, 1 μ M for 60 min) showing specific immunolabeling of the ~60 kDa tyrosine hydroxylase phosphorylated at Ser31.