

Phospho-Ser31 Tyrosine Hydroxylase Antibody
Affinity purified rabbit polyclonal antibody
Catalog # AN1031

Specification

Phospho-Ser31 Tyrosine Hydroxylase Antibody - Product Information

Application	WB
Primary Accession	P04177
Reactivity	Mouse, Rat
Predicted	Monkey
Host	Rabbit
Clonality	polyclonal
Calculated MW	60 KDa

Phospho-Ser31 Tyrosine Hydroxylase Antibody - Additional Information

Gene ID	25085
Gene Name	TH
Other Names	
Tyrosine 3-monooxygenase, Tyrosine 3-hydroxylase, TH, Th	

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser31 conjugated to KLH.

Dilution

WB~~ 1:1000

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity

Specific for the ~60k tyrosine hydroxylase protein phosphorylated atSer31.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-Ser31 Tyrosine Hydroxylase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

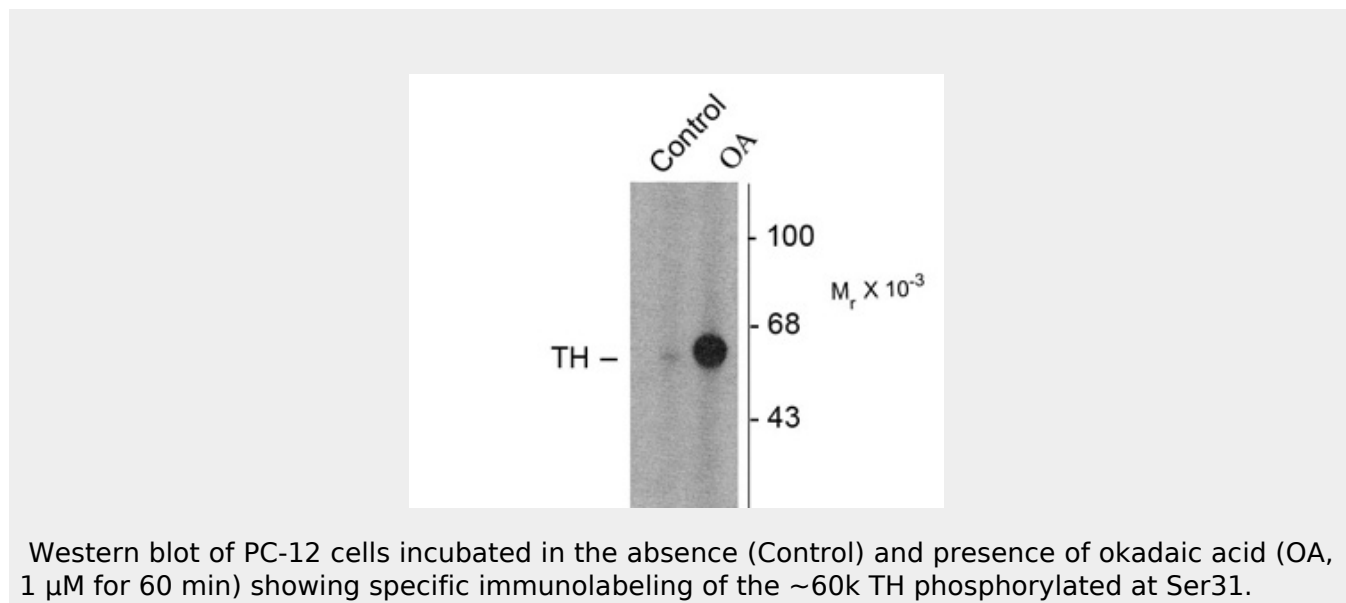
Blue Ice

Phospho-Ser31 Tyrosine Hydroxylase Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-Ser31 Tyrosine Hydroxylase Antibody - Images



Phospho-Ser31 Tyrosine Hydroxylase Antibody - 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; Jedynek 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.

Phospho-Ser31 Tyrosine Hydroxylase Antibody - References

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- Haycock JW, Ahn NG, Cobb MH, Krebs EG (1992) ERK1 and ERK2, two microtubule-associated protein 2 kinases, mediate the phosphorylation of tyrosine hydroxylase at serine-31 in situ. *Proc Natl Acad Sci (USA)* 89:2365-2369.
- Haycock JW, Bennett WF, George RJ, Waymire JC (1982) Multiple site phosphorylation of tyrosine hydroxylase. Differential regulation in situ by a 8-bromo-cAMP and acetylcholine. *J Biol Chem* 257:13699-13703.
- Jedynek JP, Ali SF, Haycock JW, Hope BT (2002) Acute administration of cocaine regulates the phosphorylation of serine-19,-31 and-40 in tyrosine hydroxylase. *J Neurochem* 82:382-388.
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Salvatore MF, Waymire JC, Haycock JW (2001) Depolarization-stimulated catecholamine biosynthesis: involvement of protein kinases and tyrosine hydroxylase phosphorylation sites in situ. *J Neurochem* 79:349-360.

Witkovsky P, Gabriel R, Haycock JW, Meller E (2000) Influence of light and neural circuitry on tyrosine hydroxylase phosphorylation in the rat retina. *J Chem Neuroanat* 19:105-116.

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