

## Anti-Phospho-Ser<sup>19</sup> Tyrosine Hydroxylase

**CATALOG NO.:** XPS-1031

**FORM:** Affinity Purified

### 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. We raised this polyclonal antibody against a peptide representing the sequence around Ser<sup>19</sup> in rat TH purified. This antibody is suitable for most immunochemical applications in a variety of mammalian and some non-mammalian species.

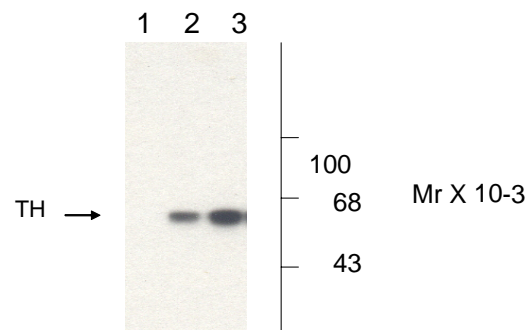
### SOURCE:

Rabbit anti-TH (Ser19) polyclonal antibody was raised against a synthetic phosphopeptide corresponding to amino acids residues surrounding the phospho-Ser<sup>19</sup> of rat tyrosine hydroxylase (TH). Rabbit anti-TH (Ser19) was purified by sequential chromatography on phospho- and non-phosphopeptide affinity columns.

### APPLICATION:

This polyclonal antibody is specific for the 60k Tyrosine Hydroxylase phosphorylated at Ser<sup>19</sup> in PC-12 cells. Antibody dilutions and tissue load should be based on tissue type and expected phosphorylation state. Initial recommended range of dilutions: 1:1000 to 1:2000. Applications include Dot Blots (DB), Immunohistochemistry (IHC), Immunofluorescence (IF) and Western Blot (WB). When internally tested under ideal conditions the working dilutions were 1:1000 for IF, IHC, DB and WB.

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**Figure:** Western blot performed on three different samples. Lane 1, non-phospho recombinant TH. Lane 2, PC-112 cell lysate. Lane 3 PC-12 cells lysate after stimulation for 10 minute incubation with 30 mM KCl. **This product is for research use only.**



**STORAGE:**

It is supplied as affinity purified polyclonal antibody, 100  $\mu$ l in 150 mM NaCl, 10 mM HEPES, 100  $\mu$ g per ml BSA and 50% glycerol, pH 7.5., and there is adequate amount of material to conduct 10-mini Western Blots. For long term storage  $-80^{\circ}\text{C}$  is recommended, but shorter term storage at  $-20^{\circ}\text{C}$  is also acceptable as aliquots may be taken without freeze/thawing due to the presence of 50% glycerol. Stock solutions are stable for a minimum of 1 year at  $-20^{\circ}\text{C}$ .

**REFERENCES:**

1. Witkovsky, P., Gabriel, R., Haycock, J. W., and Meller, E., "Influence of light and neural circuitry on tyrosine hydroxylase phosphorylation in the rat retina," *J. Chem. Neuroanat.*, **19** (2000) 105 - 116.
2. Haycock, J. W., Lew, J. Y., Garcia-Espana, A., Lee, K. Y., Harada, K., Meller, E., and Goldstein, M., "Role of serine-19 phosphorylation in regulating tyrosine hydroxylase studied with site- and phosphospecific antibodies and site-directed mutagenesis," *J. Neurochem.*, **71** (1998) 1670 – 1675.
3. Xu, Z.-Q., Lew, J. Y., Harada, K., Aman, K., Goldstein, M., Deutch, A., Haycock, J. W., and Hokfelt, T., "Immunohistochemical studies on phosphorylation of tyrosine hydroxylase in central catecholamine neurons using site- and phosphorylation state-specific antibodies," *Neuroscience*, **82** (1998) 727 – 738.