**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.

**IMMUNOGEN**

Synthetic phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser\(^{31}\) of rat tyrosine hydroxylase

**Western blot analysis using Ser\(^{31}\)**

Tyrosine Hydroxylase antibody on PC-12 cells in the absence and presence of okadaic acid (1 \(\mu\)M for 60 minutes).

**ORDERING INFORMATION**

**CATALOG NUMBER**
X1679P

**SIZE**
10 Miniblots

**FORM**
Affinity Purified

**HOST/CLONE**
Rabbit

**FORMULATION**
Provided in HEPES (pH 7.5) solution containing 150 mM NaCl, 100 \(\mu\)g per ml BSA and 50% glycerol

**CONCENTRATION**
Varies from lot to lot

**ISOTYPE**
IgG

**APPLICATIONS**

- Dot Blot, Western Blot,
- Immunofluorescence,
- Immunohistochemistry

**SPECIES REACTIVITY**

- Human, Mouse, Rat, Other

**ACCESSION NUMBER**

- Human P07101
- Mouse P24529
- Rat P04177
**POSITIVE CONTROL/TISSUE EXPRESSION**
PC-12 cell lysates stimulated with okadaic acid. Specificity: Specific for the ~60k tyrosine hydroxylase protein phosphorylated at Ser31.

**COMMENTS**
Antibody can be used for Western blot, dot blot, immunofluorescence (frozen sections) and immunohistochemistry (frozen sections) (1:1000 dilution). Optimal concentration should be evaluated by serial dilutions.

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

**SHIP CONDITIONS**
Ship on dry ice, freeze upon arrival

**STORAGE CUSTOMER**
Product should be stored at -20ºC. Aliquot to avoid freeze/thaw cycles

**STABILITY**
Products are stable for one year from purchase when stored properly

**REFERENCES**


**PRODUCT SPECIFIC REFERENCES**