Qty: 100 µL – sufficient for 10 mini-blots

Rabbit anti-phospho-Tyrosine Hydroxylase (Ser31)

Catalog No. 36-9900

Lot No. See product label

Rabbit anti-phospho-Tyrosine Hydroxylase (Ser31)

FORM
This polyclonal antibody is supplied as a 100 µL aliquot in 10mM Hepes (pH 7.5), 150 mM NaCl, 100 µg/mL BSA and 50% glycerol. This antibody is by sequential chromatography on phospho- and nonphospho- peptide affinity columns.

PAD: PS31

IMMUNOGEN
Synthetic phospho peptide derived from a region of the rat tyrosine hydroxylase (TH) protein surrounding the phosphorylated Ser31 residue.

SPECIFICITY
This antibody is specific for rat TH phosphorylated at Ser31. On Western blots, it identifies a single band at ~60 kDa.

REACTIVITY
Reactivity has been confirmed with PC-12 cell lysates stimulated by okadaic acid.

Sample	Immuno-fluorescence	Western blotting	Immuno-histochemistry
Rat	+++	+++	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western blotting: 1:1000
Immunofluorescence: 1:1000
Immunohistochemistry: 1:1000
Dot Blot: 1:1000

STORAGE
Store at –20°C.

(cont'd)

BACKGROUND

Tyrosine hydroxylase (TH) plays an important role in the physiology of adrenergic neurons. It is the first and rate-limiting enzyme involved in the biosynthesis of the catecholamines dopamine and norepinephrine from tyrosine. TH is therefore a useful marker for dopaminergic and noradrenergic neurons. The enzymatic activity of TH requires ferrous ions as cofactors and is believed to be regulated by phosphorylation. Phosphorylation of Ser31 can activate TH in vitro,[1] and has been observed at this residue following NGF, phorbol ester, and diacylglycerol treatment of PC12 cells.[2] Ser31 has been identified as a membrane depolarization-dependent and growth factor-sensitive phosphorylation site.[3]

REFERENCES

1. Tachikawa E, et al. *J Neurochem* 48:1366-1376, 1987.
2. Haycock JW, et al. *J Biol Chem* 265(20):11682-11691, 1990.
3. Mitchell JP, et al. *J Biol Chem* 265(36):22358-22364, 1990.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

Explanation of symbols

Symbol	Description	Symbol	Description
REF	Catalogue Number	LOT	Batch code
RUO	Research Use Only	IVD	*In vitro* diagnostic medical device
	Use by		Temperature limitation
	Manufacturer	EC REP	European Community authorised representative
[-]	Without, does not contain	[+]	With, contains
Protect from Light	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

For research use only. CAUTION: Not for human or animal therapeutic or diagnostic use