

**Neuropeptide Y (D7Y5A) XP<sup>®</sup> Rabbit mAb**

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IHC-P, IF-F, IF-IC	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 4, 11	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P01303	<b>Entrez-Gene Id:</b> 4852
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**Product Usage Information****Application**

Western Blotting  
Immunohistochemistry (Paraffin)  
Immunofluorescence (Frozen)  
Immunofluorescence (Immunocytochemistry)

**Dilution**

1:1000  
1:50 - 1:200  
1:200 - 1:800  
1:200 - 1:800

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #77100.

**Specificity/Sensitivity**

Neuropeptide Y (D7Y5A) XP<sup>®</sup> Rabbit mAb recognizes endogenous levels of precursor (11 kDa) and mature (4 kDa) neuropeptide Y. This antibody does not cross-react with peptide YY or peptide YY (3-36) peptides. This antibody may cross-react with a protein of unknown origin at 80 kDa in some cell lines.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human mature neuropeptide Y.

**Background**

Neuropeptide Y (NPY) is a 36 amino acid peptide that belongs to the pancreatic polypeptide (PP) family, which also includes peptide YY (PYY) (1). The mature 36-residue NPY is produced from a larger pre-pro 97-residue NPY precursor through a series of cleavage reactions at dibasic sites and C-terminal amidation of the peptide product (2). NPY is widely expressed in the central nervous system (3) and exerts its action through stimulation of 5 different receptors (Y1-Y5) that belong to the G protein-coupled receptor family (4). NPY in the hypothalamus exhibits orexigenic activity through activation of Y1 and Y5 receptors (5). NPY is involved in the control of bone homeostasis, through the regulation of osteoblast activity by Y1 and Y2 receptors (6), and the regulation of testosterone secretion by activating Y1 receptor in testicular vessels (7). Research studies suggest that modulation of NPY activity and signaling represents a potential strategy for the development of appetite control and antiobesity agents (8).

**Background References**

1. Tatemoto, K. et al. (1982) *Nature* 296, 659-60.
2. O'Hare, M.M. and Schwartz, T.W. (1989) *Cancer Res* 49, 7010-4.
3. Adrian, T.E. et al. (1983) *Nature* 306, 584-6.
4. Larhammar, D. and Salaneck, E. (2004) *Neuropeptides* 38, 141-51.
5. Lin, S. et al. (2004) *Neuropeptides* 38, 189-200.
6. Lee, N.J. and Herzog, H. (2009) *Neuropeptides* 43, 457-63.
7. Allen, C.D. et al. (2011) *Neuropeptides* 45, 55-61.
8. Simpson, K.A. et al. (2009) *Arch Bras Endocrinol Metabol* 53, 120-8.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry)

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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