

# Gly-extended PYY (1-36): A New Endogenous Form of PYY Isolated from Canine Ileum

A new endogenous form of PYY isolated from canine ileum: Gly-extended PYY(1-36). We purified and identified the peptide YY (PYY) forms present and determined their levels from a portion of the canine ileum directly adjacent to the cecum by a new extraction method designed to prevent and evaluate degradation of endogenous peptides. We used three reverse phase chromatography steps with radioimmunoassay of fractions for PYY-like-immunoreactivity (PYY-LI). The purified fractions underwent intact protein/peptide mass spectrometry identification and sequencing (i.e. "top-down" MS analysis). This analysis confirmed the identity of a new form of PYY, PYY(1-36)-Gly, which co-elutes with PYY(1-36)-NH(2) through all three of separation steps used. The PYY(1-36)-Gly form represents approximately 20% of the total PYY found in this region of the canine intestine. In addition, we also found that the PYY(3-36)-NH(2) form represents 6% of the total PYY in the canine ileo-cecal junction. The physiological implication of the Gly-extended form of PYY(1-36) warrants further investigation.

Keire DA, et al. Regul Pept. 2008 Apr 8.

Amino acid sequence of canine, human and rat Prepro-Peptide YY				
1	MVTVRRPWPA	VATVLLALLA	CLGALVHAYP	30
1	MVFVRRPWPA	LTTVLLALLV	CLGALVDAYP	30
1	MVAVRRPWPA	MVAMLLVLLA	CLGALVDAYP	30
31	AKPEAPGEDA	SPEELSRYYA	SLRHYLNLVT	60
31	IKPEAPGEDA	SPEELNRYYA	SLRHYLNLVT	60
31	AKPEAPGEDA	SPEELSRYYA	SLRHYLNLVT	60
61	RQRYGKRDSP	EAVLSKLLFP	-DGEDRRAKSW	90
61	RQRYGKRDGP	DTLLSKTFFP	-DGEDRPVRSR	90
61	RQRYGKREVP	AALFSKLLFT	DDSENLPFRSR	
91	PGGEYMW	97 Canine		
91	SEGPDLW	97 Human		
91	PEGVDQW	98 Rat		

## Gly-extended PYY:

**Gly-extended PYY (1-36) represents 20% of the total PYY in canine intestine;**

**Gly-extended PYY (3-36) represents 6% of the total PYY in canine intestine**

Gly-extended PYY (1-36) : A new endogenous form of PYY

Canine PAKPEAPGEDASPEELSRYYASLRHYLNLVTRQRYG

Human PIKPEAPGEDASPEELNRYYASLRHYLNLVTRQRYG

Rat PAKPEAPGEDASPEELSRYYASLRHYLNLVTRQRYG

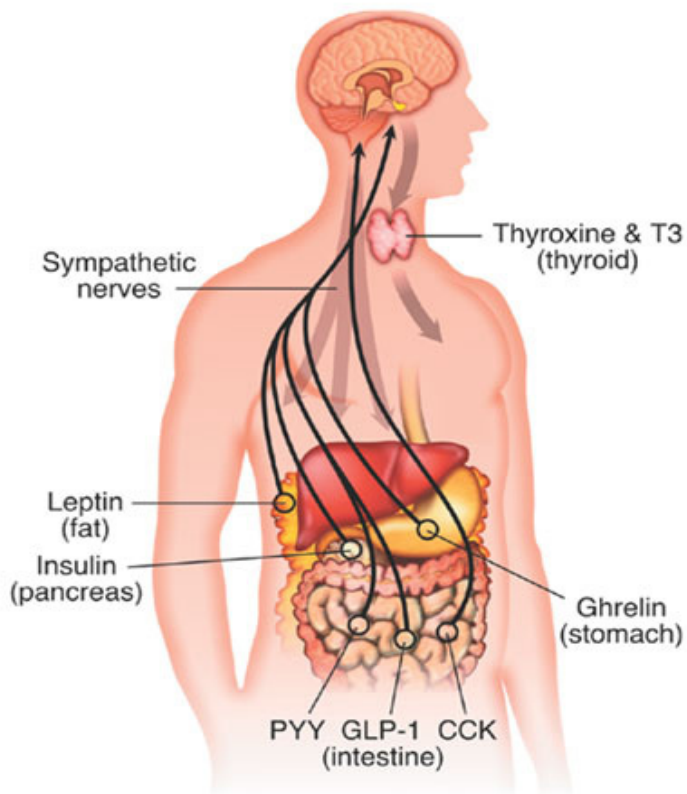
Keire DA, et al. Regul. Pept. April 8, 2008

June 9, 2008 Phoenix Pharmaceuticals



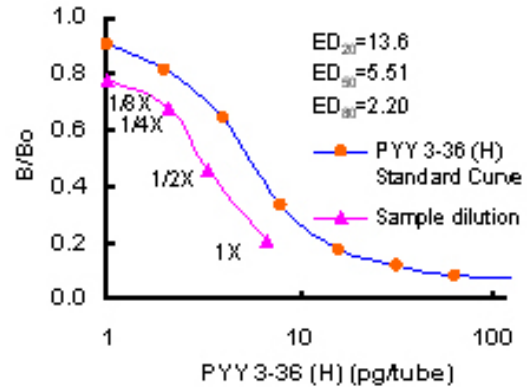
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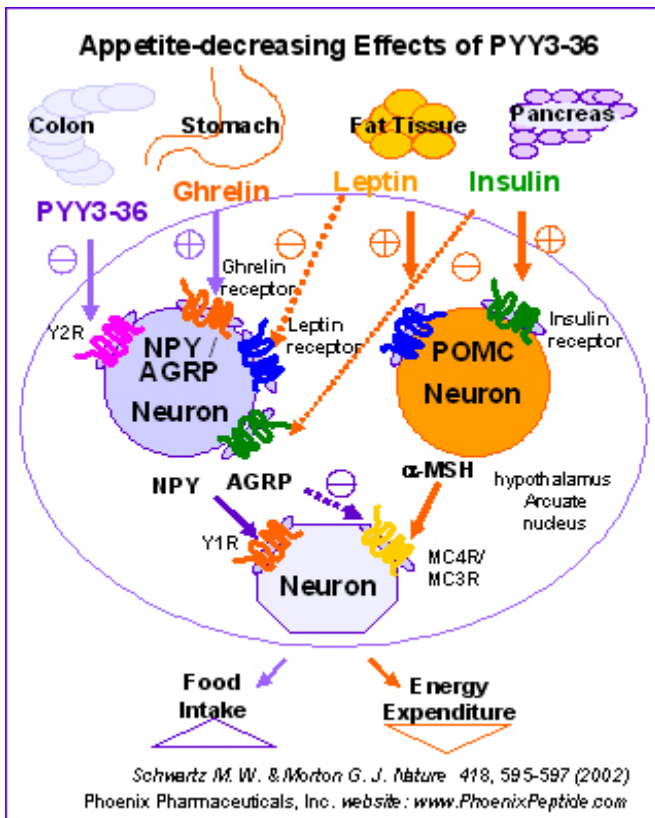


**Detection of PYY 3-36 plasma level in healthy subjects using Phoenix PYY3-36 (H) RIA Kit**

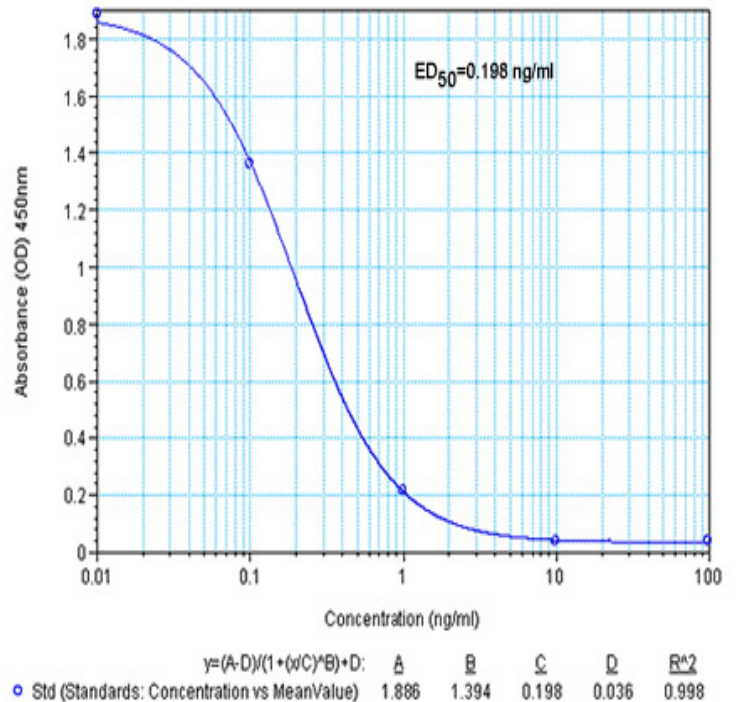
(Catalog No.: RK-059-02, Price: \$425/125 RIA tubes)

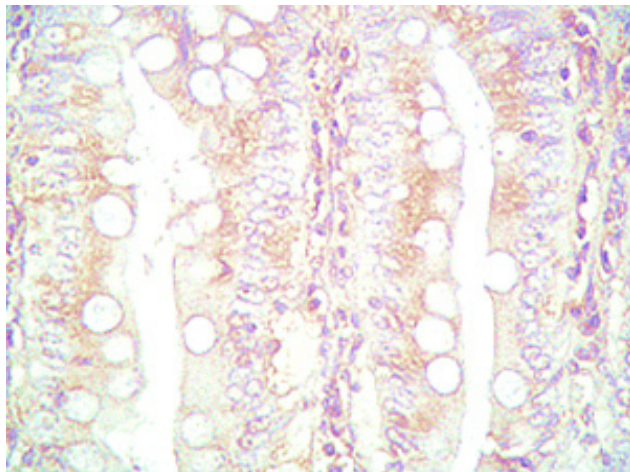


**Normal extracted plasma level of PYY3-36 in healthy subjects: 10~25 pg/ml (n=6)**

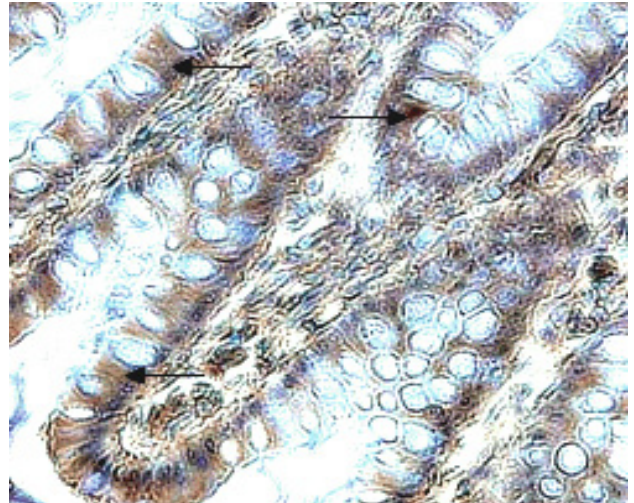


**PYY (3-36) EIA Kit (Human) (low range) (EK-059-02)**

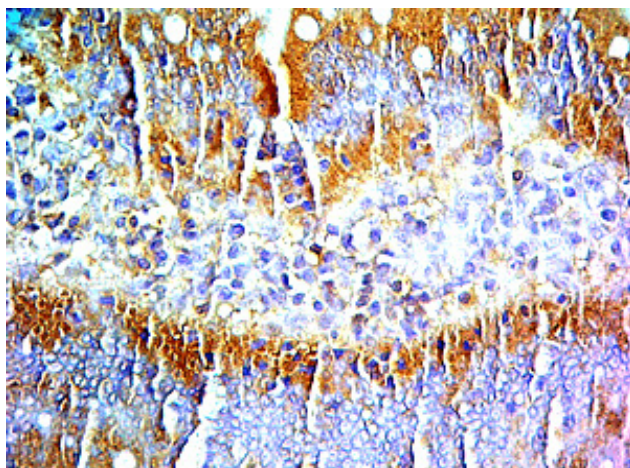




Mouse intestine tissue was stained by Rabbit Anti-PYY (3-36) (Human) Serum (Catalog No.: H-059-02)



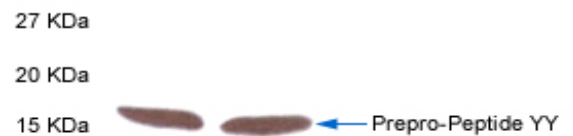
Rat colon was stained by Anti-PYY (Human) Serum (Catalog No. H-059-01)



Rat intestine tissue was stained by Rabbit Anti-PYY (3-36) (H) Serum (catalog No.: H-059-02)

Western blot analysis of Prepro-Peptide YY in rat intestine tissue by Rabbit Anti-PYY (3-36) (Human) Antibody

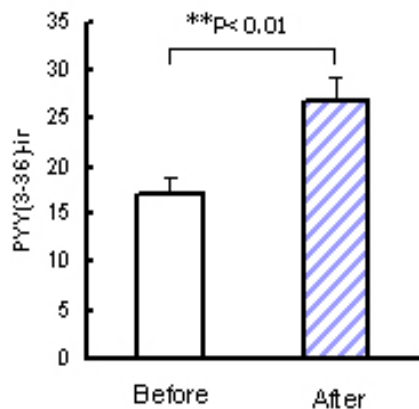
Catalog No.: WBK-059-02



Rat intestine tissue homogenate was run on 20% Tricine-PAGE gel

Rabbit Anti-PYY (3-36) (Human) Antiserum (catalog No.: H-059-02, Lot No.: PB067-4) at 1: 200 ~ 500

**Effect of fat meal on plasma levels of PYY(3-36)-ir in healthy subjects**



Plasma PYY(3-36) levels were measured in overnight fasting and after fat meal eating 45 min plasma samples (2 ml extracted).

**Selective Ligands for NPY Receptor Subtypes**

- Y<sub>1</sub>** NPY = PYY ≥ L<sup>31</sup>P<sup>34</sup>.NPY = L<sup>31</sup>.P<sup>34</sup>.PYY = BIBP 3226 >> NPY<sub>13-36} = PYY<sub>13-36} = PYY<sub>13-36} = PP</sub></sub></sub>
- Y<sub>2</sub>** NPY = PYY ≥ NPY<sub>12-36} = PYY<sub>2-36} = PYY<sub>13-36} >> L<sup>31</sup>P<sup>34</sup>.NPY L<sup>31</sup>P<sup>34</sup>.PYY = PP BIBP 3226</sub></sub></sub>
- Y<sub>5</sub>** HPP > NPY = PYY L<sup>31</sup>P<sup>34</sup>.NPY = L<sup>31</sup>P<sup>34</sup>.PYY = NPY<sub>2-36} = PYY<sub>2-36} >> HPP > BIBP 3226</sub></sub>

Catalog#	Product Name	Standard Size
059-01	PYY (Human)	200 µg
059-02	PYY (3-36) (Human)	200 µg
059-06	Gly-extended PYY (1-36) (Canine, Rat)	100 ug
B-059-02	PYY (3-36) [Biotinyl] (Human) - Biotin Labeled	10 ug
B-G-059-02	PYY (3-36) (Human) - Biotin Labeled Purified IgG	100 µl
EK-059-02	PYY (3-36) (Human) - EIA Kit	1 kit
FC3-G-059-02	PYY (3-36) (Human) - Cy3 Labeled Purified IgG	100 µl
FC5-G-059-02	PYY (3-36) (Human) - Cy5 Labeled Purified IgG	100 µl
FG-059-02A	PYY (3-36) (Human) - FAM Labeled	1 nmol
FG-G-059-02A	PYY (3-36) (Human) - FAM Labeled Purified IgG	100 µl
FR-059-02	PYY (Human) - Rhodamine Labeled	1 nmol
FR-G-059-02	PYY (3-36) (Human) - Rhodamine Labeled Purified IgG	100 µl
G-059-01	PYY (Human) - Purified IgG Antibody	400 µg
G-059-02	PYY (3-36) (Human) - Purified IgG Antibody	200 µg
H-059-01	PYY (Human) - Antibody for Immunohistochemistry	50 µl
H-059-02	PYY (3-36) (Human) - Antibody for Immunohistochemistry	50 µl
MRK-059-02	PYY (3-36) (Human, Rat, Mouse) - Magnetic Bead RIA kit	1 kit
RK-059-01	PYY (Human) - RIA Kit	1 kit
RK-059-02	PYY (3-36) (Human) - RIA Kit	1 kit
T-059-01	PYY (Human) - I-125 Labeled	10 µCi
T-059-02	PYY (3-36) (Human) - I-125 Labeled	10 µCi
T-G-059-01	PYY (Human) - I-125 Labeled Purified IgG	10 µCi
T-G-059-02	PYY (3-36) (Human) - I-125 Labeled Purified IgG	10 µCi