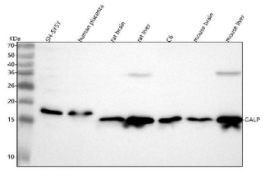
GALP Antibody / Galanin-like peptide (FY13234)

Catalog No.	Formulation	Size
FY13234	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9UBC7
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This GALP antibody is available for research use only.



Western blot analysis of GALP using anti-GALP antibody. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human placenta tissue lysates, Lane 3: rat brain tissue lysates, Lane 4: rat liver tissue lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse liver tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GALP antibody at 0.25 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. Western blot detection of GALP shows a single band at ~17 kDa in human samples and ~15 kDa in mouse/rat, consistent with the small pro-peptide migrating slightly above the calculated ~13 kDa. An additional ~36 kDa band appears in mouse/rat liver only; given the low hepatic expression of GALP, this band likely reflects non-specific reactivity or an SDS-resistant aggregate rather than authentic GALP.

Description

GALP antibody detects Galanin-like peptide, a hypothalamic neuropeptide involved in energy balance, feeding behavior, and reproductive hormone regulation. The UniProt recommended name is Galanin-like peptide (GALP). This neuropeptide acts within the central nervous system to integrate metabolic, thermoregulatory, and neuroendocrine signals, linking energy status to reproductive function and stress adaptation.

Functionally, GALP antibody identifies a 60-amino-acid peptide derived from a larger precursor encoded by the GALP gene. The peptide binds to galanin receptors GALR1, GALR2, and GALR3, activating G protein-mediated signaling pathways that influence neuronal excitability and neuroendocrine secretion. GALP is expressed primarily in the arcuate nucleus and median eminence of the hypothalamus, where it regulates appetite, body temperature, and pituitary hormone release. Its expression is modulated by leptin, insulin, and circulating glucose levels, positioning GALP as a metabolic signal integrator.

The GALP gene is located on chromosome 19q13.43 and exhibits conserved expression in mammals, reflecting its importance in metabolic control. GALP neurons project to hypothalamic and extrahypothalamic regions involved in feeding and thermoregulation, including the paraventricular nucleus and dorsal raphe.

Pathologically, dysregulation of GALP signaling contributes to metabolic and neuroendocrine disorders such as obesity, infertility, and hypothalamic dysfunction. Reduced GALP expression is associated with leptin deficiency and disrupted reproductive cycling, while elevated levels influence energy expenditure and thermogenesis. Research using GALP antibody supports studies in neuroendocrinology, energy metabolism, and reproductive physiology.

GALP antibody is validated for immunohistochemistry, immunofluorescence, and ELISA to detect neuropeptides in hypothalamic and pituitary tissues. NSJ Bioreagents provides GALP antibody reagents optimized for studies in appetite regulation, metabolic homeostasis, and stress signaling.

Structurally, Galanin-like peptide shares sequence homology with galanin in its N-terminal region, allowing interaction with the same receptor family but with distinct potency and distribution. Post-translational processing of prepro-GALP yields the mature peptide with amidated C-terminus essential for receptor activation. This antibody enables analysis of GALP's role in central metabolic control and neuroendocrine integration.

Application Notes

Optimal dilution of the GALP antibody should be determined by the researcher.

Immunogen

E.coli-derived human GALP recombinant protein (Position: M1-S116) was used as the immunogen for the GALP antibody.

Storage

After reconstitution, the GALP antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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