

PACAP (F-2): sc-166180

BACKGROUND

Glucagon is a pancreatic hormone that functions as an antagonist to Insulin, stimulating the conversion of glycogen to glucose and increasing blood sugar levels. Glucagon-like peptide-1 (GLP-1), Glucagon-like peptide-2 (GLP-2), VIP (vasoactive intestinal peptide) and PACAP (pituitary adenylate cyclase activating polypeptide) are members of the glucagon family of hormones. GLP-1 functions as a transmitter in the central nervous system, inhibiting feeding and drinking behavior, whereas GLP-2 is a stimulator of intestinal epithelial growth. VIP causes vasodilation resulting in the lowering of blood pressure. PACAP is abundant in the hypothalamus and has been shown to increase the synthesis of several hormones, including growth hormone.

REFERENCES

1. Rouille, Y., et al. 1995. Differential processing of proglucagon by the subtilisin-like prohormone convertases PC2 and PC3 to generate either glucagon or glucagon-like peptide. *J. Biol. Chem.* 270: 26488-26496.
2. Moens, K., et al. 1996. Expression and functional activity of Glucagon, Glucagon-like peptide I, and glucose-dependent Insulinotropic peptide receptors in rat pancreatic islet cells. *Diabetes* 45: 257-261.

CHROMOSOMAL LOCATION

Genetic locus: ADCYAP1 (human) mapping to 18p11.32; Adcyap1 (mouse) mapping to 17 E5.

SOURCE

PACAP (F-2) is a mouse monoclonal antibody raised against amino acids 101-176 of PACAP of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PACAP (F-2) is recommended for detection of PACAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PACAP siRNA (h): sc-39530, PACAP siRNA (m): sc-39531, PACAP siRNA (r): sc-270540, PACAP shRNA Plasmid (h): sc-39530-SH, PACAP shRNA Plasmid (m): sc-39531-SH, PACAP shRNA Plasmid (r): sc-270540-SH, PACAP shRNA (h) Lentiviral Particles: sc-39530-V, PACAP shRNA (m) Lentiviral Particles: sc-39531-V and PACAP shRNA (r) Lentiviral Particles: sc-270540-V.

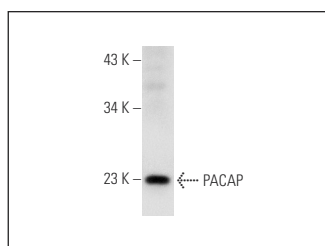
Molecular Weight of PACAP: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or rat testis extract: sc-2400.

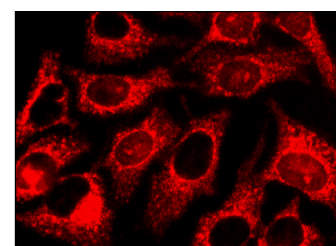
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PACAP (F-2): sc-166180. Western blot analysis of PACAP expression in rat testis tissue extract.



PACAP (F-2): sc-166180. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Matynia, A., et al. 2016. Peripheral sensory neurons expressing melanopsin respond to light. *Front. Neural Circuits* 10: 60.
2. Wang, T.A., et al. 2019. Thermoregulation via temperature-dependent PGD2 production in mouse preoptic area. *Neuron* 103: 309-322.
3. Perry, K.J., et al. 2019. The role of sensory innervation in cornea-lens regeneration. *Dev. Dyn.* 248: 530-544.
4. Lu, L., et al. 2020. Beneficial effects of crocin against depression via pituitary adenylate cyclase-activating polypeptide. *Biomed Res. Int.* 2020: 3903125.
5. Wang, K., et al. 2021. Hyperoside suppresses NLRP3 inflammasome in Parkinson's disease via pituitary adenylate cyclase-activating polypeptide. *Neurochem. Int.* 152: 105254.
6. Liu, M., et al. 2023. PACAP inhibition alleviates neuropathic pain by modulating Nav1.7 through the MAPK/ERK signaling pathway in a rat model of chronic constriction injury. *Neuropeptides* 99: 102327.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.