

Product Data Sheet

Cat# **SP-86689-5**

Description: PGC-1 (205–216), Proliferator - activated Receptor Coactivator - 1 (205–216) (AA: Ac-Arg-Pro-Cys-Ser-Glu-Leu-Leu-Lys-Tyr-Leu-Thr-Thr-NH₂) (MW: 1464.75)

Size: 5 mg

Purity: >95%

Store: Desiccated at -20oC.

PPAR-gamma coactivator 1-alpha or PFC-1 alpha or PGC-1a is a transcriptional coactivator for steroid receptors and nuclear receptors. It greatly increases the transcriptional activity of PPARG and thyroid hormone receptor on the uncoupling protein promoter.

Main functions include regulation of key mitochondrial genes that contribute to the program of adaptive thermogenesis. PFC-1 plays an essential role in metabolic reprogramming in response to dietary availability through coordination of the expression of a wide array of genes involved in glucose and fatty acid metabolism. Induces the expression of PERM1 in the skeletal muscle in an ESRRA-dependent manner. Also involved in the integration of the circadian rhythms and energy metabolism. Required for oscillatory expression of clock genes, such as ARNTL/BMAL1 and NR1D1, through the coactivation of RORA and RORC, and metabolic genes, such as PDK4 and PEPCK. PGC-1 increases Akt (PKB) and Phospho-Akt (Ser 473 and Thr 308) levels in muscle and also leads to calcineurin activation.

References

Knutti D., (2000). Mol. Cell. Biol. 20:2411-2422. Dominy J.E. Jr., (2010). Biochim. Biophys. Acta 1804:1676-1683. Shin J.H., (2011). Cell 144:689-702. Cho Y., (2013). J. Biol. Chem. 288:25207-25218. Romanino K., (2011). Proc. Natl. Acad. Sci. U.S.A. 108 (51): 20808–13. Summermatter S., (2012). Am. J. Physiol., Cell Physiol. 302 (1): C88–99.

All peptides are for in vitro research use only.

Related Items

Catalog#	ProdDescription
MA-20224	Mouse Monoclonal Antibody to peroxisome proliferator-activated receptor gamma (PPARG)
RP-685	Recombinant (E.Coli) Human Peroxisome Proliferator Activated Receptor Gamma
RP-740	Recombinant (E.Coli, GST tag) Human Peroxisome Proliferator Activated Receptor Gamma (1-477)
SP-86689-5	PGC - 1 (205–216), Proliferator - activated Receptor Coactivator - 1 (205–216) (
SP-86689-5- PPAR-gamma-205-216	150701A

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