Human PGC1α Alexa Fluor® Plus 405-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 474915

Catalog Number: FAB10784AFP405

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PGC1α in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 474915
Purification	Protein A or G purified
Immunogen	*E. coli*-derived human PGC1α Glu11-Ile280 Accession # Q9UBK2
Conjugate	Alexa Fluor Plus 405 Excitation Wavelength: 404 nm Emission Wavelength: 455 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

DATA

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PGC1α (PPAR-γ Coactivator 1 alpha; also LEM6) is a 97-120 kDa member of the PGC-1 family of proteins. It is expressed in select cell types, including brown adipocytes, skeletal muscle and hepatocytes. PGC1α participates in both RNA processing and transcriptional coactivation in conjunction with multiple nuclear hormone receptors such as PPARγ, RAR and TR. Human PCG1α is 798 amino acids (aa) in length. It contains an LxxLL nuclear receptor binding motif (aa 144-148), one PPAR-γ interaction domain (aa 293-339), two NLSs and an RNA binding/processing region (aa 566-710). PGC1α activity is regulated by phosphorylation. AMPK is known to phosphorylate Thr178 and Ser539, promoting cotranscriptional activity. Conversely, Akt-mediated phosphorylation at Ser571 is reported to downregulate PGC1α activity. This latter effect is achieved by an initial Ser571 phosphorylation, followed by GCN5 binding and subsequent PCG1α acetylation that promotes PGC-1α dissociation from target gene promoters.

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