



PGC-1a (Methyl-Lys233) Antibody

#58035

Number: 58035

Amount: 100µg/100µl

Form of Antibody: Rabbit IgG in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

Storage/Stability: Store at -20°C/1 year

Immunogen: synthetic methylpeptide corresponding to residues surrounding Lys233 of human PGC-1a

Purification: The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific methylpeptide. The antibody against non- methylpeptide was removed by chromatography using non-methylpeptide corresponding to the methylation site.

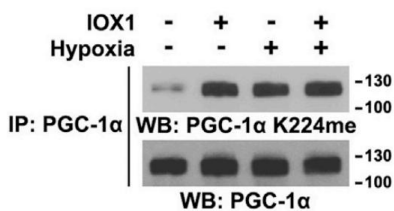
Specificity/Sensitivity: PGC-1a (Methyl-Lys233)antibody detects endogenous levels of PGC-1a only when methylated at lysine233 .

Reactivity: Human

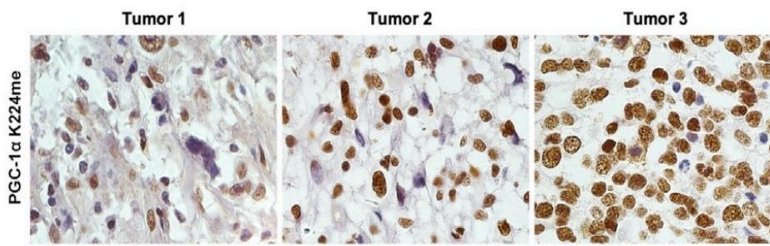
Applications:

Predicted MW: 130KD

WB :1:500~1:1000 IHC:1:50-200



U87 cells were pretreated with or without 200 mM IOX1 for 12 h, followed by treatment with or without hypoxia for 12 h. Immunoblotting analyses were performed.



Human GBM samples were immunohistochemically stained with the indicated antibodies

Background :Hypoxia, which occurs during tumor growth, triggers complex adaptive responses in which peroxisome proliferator-activated receptor gamma coactivator-1 alpha (PGC-1a) plays a critical role in mitochondrial biogenesis and oxidative metabolism. KDM3A functions as an oxygen sensor and demethylates K224-monomethylated PGC-1a under normoxic conditions. Hypoxia inhibits KDM3A activity and increases PGC-1a K224 monomethylation, resulting in the inhibition of PGC-1a and PGC1a-dependent mitochondrial biogenesis, a decrease of ROS levels and apoptosis, and the promotion of brain tumor development [1]

Reference:[1] Qian X, Li X, Shi Z, Bai X, Xia Y, Zheng Y, Xu D, Chen F, You Y, Fang J, Hu Z, Zhou Q, Lu Z. KDM3A Senses Oxygen Availability to Regulate PGC-1 α -Mediated Mitochondrial Biogenesis. Mol Cell. 2019 Dec 19;76(6):885-895.e7. doi: 10.1016/j.molcel.2019.09.019.