

Anti-HIF1A Antibody (2X244)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	2X244
Purification:	Affinity-chromatography

Applications

Verified Activity:	<p>1. Immunofluorescence staining of Hela cell with TMAH-00543 at 1:20, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).</p> <p>2. Overlay Peak curve showing Hela cells stained with TMAH-00543 (red line) at 1:50. The cells were fixed in 4% formaldehyde (15min) and permeated by 0.2% TritonX-100 for 10min. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1μg/1*10⁶ cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-Rabbit IgG(H+L) at 1/200 dilution for 35 min at 4°C. Isotype control antibody (green line) was rabbit IgG1 (1μg/1*10⁶ cells) used under the same conditions. Acquisition of >10,001 events was performed.</p>
Application:	ELISA, IF, FCM
Recommended	IF:1:20-1:200; FCM:1:20-1:200.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human HIF1A Protein
Antigen Species:	Human
Gene ID:	3091
Uniprot ID:	Q16665
Synonyms:	hypoxia inducible factor 1, α subunit (basic helix-loop-helix transcription factor);PASD8;HIF1; HIF-1 alpha;HIF-1 α ;hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor);MOP1;bHLHe78;HIF-1 α ;HIF1- α ;HIF-1A;HIF1-ALPHA
Biology Area:	Epigenetics and Nuclear Signaling, Cancer, Cardiovascular, Metabolism

Research Background

Functions as a master transcriptional regulator of the adaptive response to hypoxia. Under hypoxic conditions, activates the transcription of over 40 genes, including erythropoietin, glucose transporters, glycolytic enzymes, vascular endothelial growth factor, HILPDA, and other genes whose protein products increase oxygen delivery or

facilitate metabolic adaptation to hypoxia. Plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease. Heterodimerizes with ARNT; heterodimer binds to core DNA sequence 5'-TACGTG-3' within the hypoxia response element (HRE) of target gene promoters. Activation requires recruitment of transcriptional coactivators such as CREBBP and EP300. Activity is enhanced by interaction with NCOA1 and/or NCOA2. Interaction with redox regulatory protein APEX1 seems to activate CTAD and potentiates activation by NCOA1 and CREBBP. Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia. (Microbial infection) Upon infection by human coronavirus SARS-CoV-2, is required for induction of glycolysis in monocytes and the consequent proinflammatory state. In monocytes, induces expression of ACE2 and cytokines such as IL1B, TNF, IL6, and interferons. Promotes human coronavirus SARS-CoV-2 replication and monocyte inflammatory response.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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