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Product datasheet for TA322210

PHD3 (EGLN3) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC
Recommended Dilution:	IHC: 25-100 Positive control: Human liver cancer Predicted cell location: Cytoplasm
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Full length fusion protein
Formulation:	PBS pH7.3, 0.05% NaN3, 50% glycerol
Concentration:	lot specific
Purification:	Antigen affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	egl-9 family hypoxia inducible factor 3
Database Link:	NP_071356 Entrez Gene 54702 RatEntrez Gene 112407 MouseEntrez Gene 112399 Human Q9H6Z9

View online »

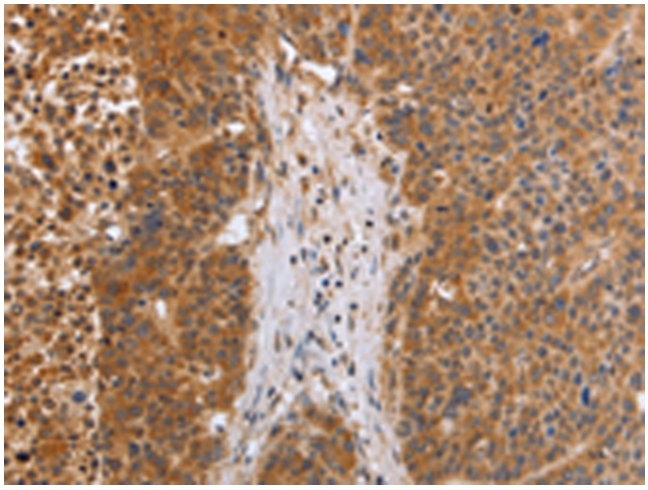
Background: Cellular oxygen sensor that catalyzes; under normoxic conditions; the post-translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal; NODD; and C-terminal; CODD) of HIF1A. Also hydroxylates HIF2A. Has a preference for the CODD site for both HIF1A and HIF2A. Hydroxylation on the NODD site by EGLN3 appears to require prior hydroxylation on the CODD site. Hydroxylated HIFs are then targeted for proteasomal degradation via the von Hippel-Lindau ubiquitination complex. Under hypoxic conditions; the hydroxylation reaction is attenuated allowing HIFs to escape degradation resulting in their translocation to the nucleus; heterodimerization with HIF1B; and increased expression of hypoxy-inducible genes. EGLN3 is the most important isozyme in limiting physiological activation of HIFs (particularly HIF2A) in hypoxia. Also hydroxylates PKM in hypoxia; limiting glycolysis. Under normoxia; hydroxylates and regulates the stability of ADRB2. Regulator of cardiomyocyte and neuronal apoptosis. In cardiomyocytes; inhibits the anti-apoptotic effect of BCL2 by disrupting the BAX-BCL2 complex.

Synonyms: HIFP4H3; HIFPH3; PHD3

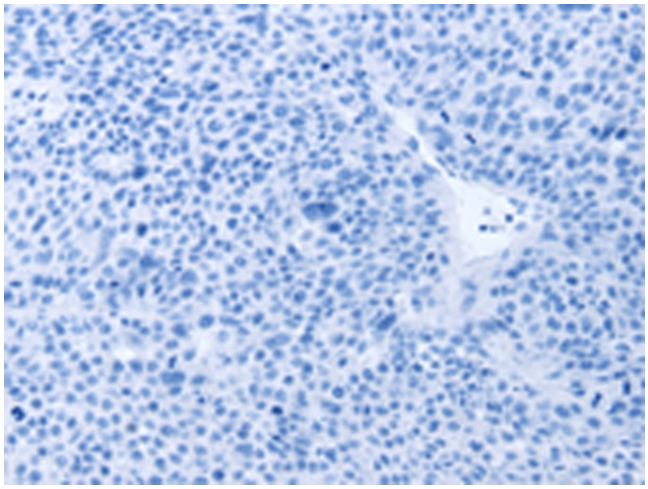
Protein Families: Druggable Genome

Protein Pathways: Pathways in cancer, Renal cell carcinoma

Product images:



Immunohistochemistry of paraffin-embedded Human liver cancer tissue using TA322210 (EGLN3 Antibody) at dilution 1/30 (Original magnification: ×200)



Immunohistochemistry of paraffin-embedded Human liver cancer tissue using TA322210 (EGLN3 Antibody) at dilution 1/30, treated with fusion protein. (Original magnification: ×200)