Revision 1

Store at -20C

#3293

PHD-2/Egln1 Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	50	Rabbit	#Q9GZT9	54583

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

PHD-2/Egln1 Antibody detects endogenous levels of total PHD-2/Egln1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val226 of human PHD-2/Egln1 protein. Antibodies are purified by peptide affinity chromatography.

Background

PHD1 (Egln2), PHD-2 (Egln1), and PHD3 (Egln3) are members of the Egln family of proline hydroxylases. They function as oxygen sensors that catalyze the hydroxylation of HIF on prolines 564 and 402, initiating the first step of HIF degradation through the VHL/ubiquitin pathway (1,2). PHD1 is highly expressed in a wide array of tissues whereas PHD2 and PHD3 are expressed mainly in heart and skeletal muscle (1,3). The mRNA levels of PHD are upregulated by HIF through the hypoxia-response element under low oxygen conditions (4-7). These three enzymes also exhibit different peptide specificity target proteins, PHD1 and PHD2 can hydroxylate both proline 402 and proline 564, but PHD3 can only hydroxylate proline 564 (2,8). In addition to HIF, PHD enzymes have also has been shown to catalyze the hydroxylation of RNA polymerase subunits and myogenin (3,9).

Background References

1. Freeman, R.S. et al. (2003) *Mol Cells* 16, 1-12.
2. Villar, D. et al. (2007) *Biochem J* 408, 231-40.
3. Fu, J. et al. (2007) *J Biol Chem* 282, 12410-8.
4. D'Angelo, G. et al. (2003) *J Biol Chem* 278, 38183-7.
5. del Peso, L. et al. (2003) *J Biol Chem* 278, 48690-5.
6. Pescador, N. et al. (2005) *Biochem J* 390, 189-97.
7. Metzen, E. et al. (2005) *Biochem J* 387, 711-7.
8. Hirsilä, M. et al. (2003) *J Biol Chem* 278, 30772-80.
9. Mikhaylova, O. et al. (2008) *Mol Cell Biol* 28, 2701-17.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.