

[KD Validated] Anti-P4HB Mouse mAb

Purified Recombinant Mouse Monoclonal Antibody

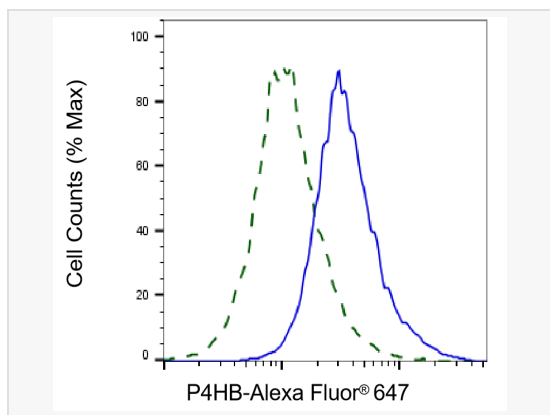
Catalog # M020894

Product Information

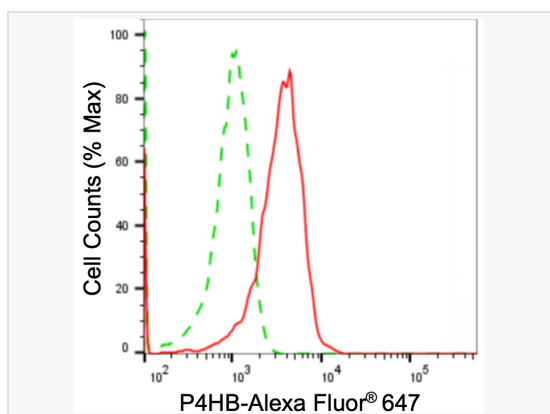
Application	WB, FC, IF (Cell)/ICC
Reactivity	Human
Dilution	WB 1:2,500~1:5,000; FC 1:200~1:2,000; IF 1:100~1:1,000
Host	Mouse
Clonality	Monoclonal
Clone No.	54Q37R49
Isotype	IgG
Label	Unconjugated
Immunogen	Recombinant protein of human PDI
Format	Affinity purified monoclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 12 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	[KD Validated] Anti-P4HB Mouse mAb [54Q37R49] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

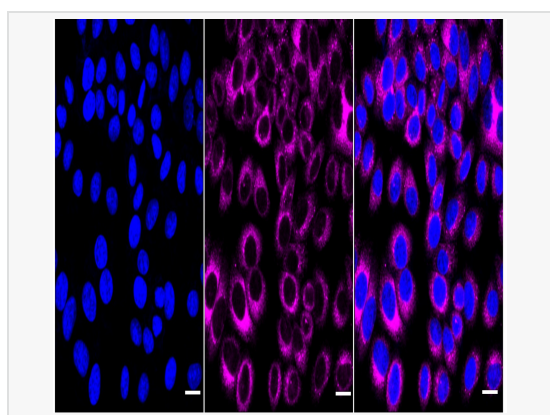
Synonyms	P4HB; Prolyl 4-Hydroxylase Subunit Beta; PDIA1; PDI; P4Hbeta; ERBA2L; PROHB; PO4HB; PO4DB; DSI; GIT; Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide; Protein Disulfide Isomerase Family A, Member 1; Protein Disulfide Isomerase-Associated 1; Cellular Thyroid Hormone-Binding Protein; Prolyl 4-Hydroxylase, Beta Polypeptide; Collagen Prolyl 4-Hydroxylase Beta; Protein Disulfide-Isomerase; EC 5.3.4.1; P55; Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide (Protein Disulfide Isomerase; Thyroid Hormone Binding Protein P55); Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide (Protein Disulfide Isomerase-Associated 1); Protein Disulfide Isomerase/Oxidoreductase; Glutathione-Insulin Transhydrogenase; Thyroid Hormone-Binding Protein P55; Testicular Secretory Protein Li 32; Protocollagen Hydroxylase; CLCRP1; PHDB.
Calculated MW	Calculated MW: 57 kDa, Observed MW: 57 kDa
Uniprot ID	P07237
Gene ID	5034
Background	This gene encodes the beta subunit of prolyl 4-hydroxylase, a highly abundant multifunctional enzyme that belongs to the protein disulfide isomerase family. When present as a tetramer consisting of two alpha and two beta subunits, this enzyme is involved in hydroxylation of prolyl residues in procollagen. This enzyme is also a disulfide isomerase containing two thioredoxin domains that catalyze the formation, breakage and rearrangement of disulfide bonds. Other known functions include its ability to act as a chaperone that inhibits aggregation of misfolded proteins in a concentration-dependent manner, its ability to bind thyroid hormone, its role in both the influx and efflux of S-nitrosothiol-bound nitric oxide, and its function as a subunit of



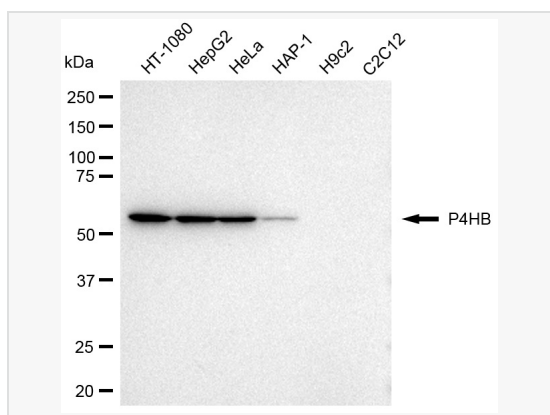
Validation of P4HB knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HT1080 cells were stained with P4HB antibody (M020894, 1:2,000) and analyzed using BD flow cytometer.



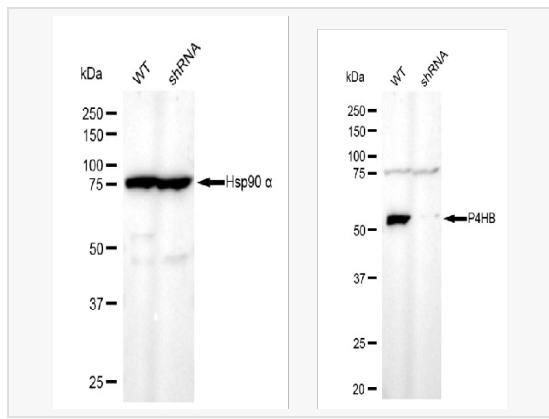
Flow cytometric analysis of P4HB expression in HepG2 cells using P4HB antibody (M020894, 1:2,000). Green, isotype control; red, P4HB.



Immunocytochemical staining of HepG2 cells with P4HB antibody (M020894, 1:1,000). Nuclei were stained blue with DAPI; P4HB was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 μ m.



Western blotting analysis using P4HB antibody (M020894). Total cell lysates (30 μ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with P4HB antibody (M020894, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



Western blotting analysis using P4HB antibody (M020894). P4HB expression in wild type (WT) and P4HB shRNA knockdown (KD) HT-1080 cells with 30 μ g of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with P4HB antibody (M020894, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.