10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Rabbit Anti-Heme Oxygenase Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52105

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P09601
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	32819
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HO-1
Epitope Specificity	101-200/288
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Microsome. Endoplasmic reticulum.
SIMILARITY	Belongs to the heme oxygenase family.
DISEASE	Defects in HMOX1 are the cause of heme oxygenase 1 deficiency (HMOX1D) [MIM:614034]. A disease characterized by impaired stress hematopoiesis, resulting in marked erythrocyte fragmentation and intravascular hemolysis, coagulation abnormalities, endothelial damage, and iron deposition in renal and hepatic tissues. Clinical features include persistent hemolytic anemia, asplenia, nephritis, generalized erythematous rash, growth retardation and hepatomegaly.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The hemeoxygenase-1 calls that the hemoglobin oxidizes to synthesize the enzyme again-1(hemeoxygenase-1, HO-1) is the catalyst enzyme that a kind of hemoglobin declines the solution, under the NADPH and the cell dye P-450 revivification enzymes and the member oxygen functions, the catalyst HO-1 hemoglobin declines the solution as the courage green vegetable, CO and irons, the former revivification has the very strong anti- to oxidize the ability after become the red vegetable of courage , the latter is a kind of important letter to make the member.

Additional Information

Gene ID	3162
Other Names	HO-1; HSP32; HMOX1D; bK286B1; Heme oxygenase 1; HMOX1; HO; HO1
Target/Specificity	Expressed at higher levels in renal cancer tissue than in normal tissue (at protein level).

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	HMOX1
Synonyms	HO, HO1
Function	[Heme oxygenase 1]: Catalyzes the oxidative cleavage of heme at the alpha-methene bridge carbon, released as carbon monoxide (CO), to generate biliverdin IXalpha, while releasing the central heme iron chelate as ferrous iron (PubMed:11121422, PubMed:19556236, PubMed:7703255). Affords protection against programmed cell death and this cytoprotective effect relies on its ability to catabolize free heme and prevent it from sensitizing cells to undergo apoptosis (PubMed:20055707).
Cellular Location	Endoplasmic reticulum membrane; Single-pass type IV membrane protein; Cytoplasmic side
Tissue Location	Expressed at higher levels in renal cancer tissue than in normal tissue (at protein level)

Background

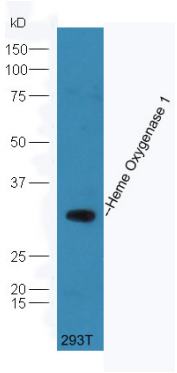
Heme oxygenase cleaves the heme ring at the alpha methene bridge to form biliverdin. Biliverdin is subsequently converted to bilirubin by biliverdin reductase. Under physiological conditions, the activity of heme oxygenase is highest in the spleen, where senescent erythrocytes are sequestrated and destroyed. Exhibits cytoprotective effects since excess of free heme sensitizes cells to undergo apoptosis.

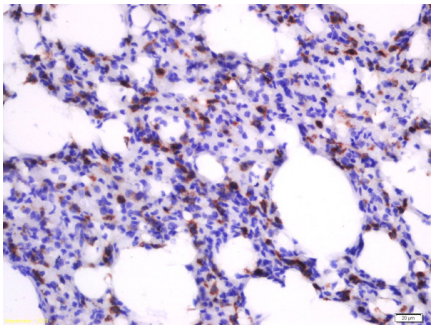
References

Yoshida T.,et al.Eur. J. Biochem. 171:457-461(1988).
Collins J.E.,et al.Genome Biol. 5:R84.1-R84.11(2004).
Dunham I.,et al.Nature 402:489-495(1999).
Keyse S.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 86:99-103(1989).
Shibahara S.,et al.Eur. J. Biochem. 179:557-563(1989).

Images

293T cell lysate probed (AP52105) at 1:300 overnight in 4˚C. Followed by conjugation to the secondary antibody at 1:5000 90min in 37˚C.





Paraformaldehyde-fixed, paraffin embedded rat lung tissue; Antigen retrieval by boiling in sodium citrate buffer(pH6) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (normal goat serum) at 37°C for 20min; Antibody incubation with Rabbit Anti-Heme Oxygenase Polyclonal Antibody, Unconjugated AP52105 at 1:500 overnight at 4°C, followed by a conjugated secondary and DAB staining