

Product datasheet for **TA326354**

Heme Oxygenase 1 (HMOX1) Mouse Monoclonal Antibody [Clone ID: 1F12-A6]

Product data:

Product Type:	Primary Antibodies
Clone Name:	1F12-A6
Applications:	WB
Recommend Dilution:	WB: 1:500-1000
Reactivity:	Bovine, Human, Mouse
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	Human HO-1 synthetic peptide, amino acids 1-30
Formulation:	PBS pH7.4, 50% glycerol
Concentration:	1 mg/ml
Purification:	Protein G Purified
Gene Name:	heme oxygenase 1
Database Link:	NP_002124 Entrez Gene 15368 Mouse Entrez Gene 3162 Human



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Background:

Heme-oxygenase is a ubiquitous enzyme that catalyzes the initial and rate-limiting steps in heme catabolism yielding equimolar amounts of biliverdin, iron and carbon monoxide. Biliverdin is subsequently converted to bilirubin and the free iron is sequestered to ferritin. These products have important physiological effects as carbon monoxide is a potent vasodilator; biliverdin and bilirubin are potent antioxidants; and the free iron increases oxidative stress and regulates the expression of many mRNAs. There are three isoforms of heme-oxygenase, HO-1, HO-2 and HO-3; however HO-1 and HO-2 are the major isoforms as they both have been identified in mammals. HO-1, also known as heat shock protein 32, is an inducible isoform activated by most oxidative stress inducers, cytokines, inflammatory agents and heat shock. HO-2 is a constitutive isoform which is expressed under homeostatic conditions. HO-1 is also considered to be a cytoprotective factor in that free heme is highly reactive and cytotoxic, and secondly, carbon monoxide is a mediator inhibiting the inflammatory process and bilirubin is a scavenger for reactive oxygen, both of which are the end products of heme catalyzation. It has also been shown that HO-1 deficiency may cause reduced stress defense, a pro-inflammatory tendency, susceptibility to atherosclerotic lesion formation, endothelial cell injury, and growth retardation. Up-regulation of HO-1 is therefore said to be one of the major defense mechanisms of oxidative stress.

Synonyms:

bK286B10; HMOX1D; HO-1; HSP32

Note:

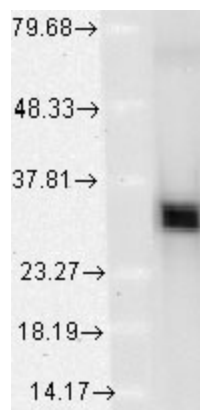
Detects a 32kDa protein, corresponding to the molecular mass of HO-1 on SDS Page immunoblots. Does not cross-react with HO-2

Protein Families:

Druggable Genome, Transmembrane

Protein Pathways:

Porphyrin and chlorophyll metabolism

Product images:

Western blot analysis of HO-1 using a 1:1000 dilution of the antibody