

## Human HO-1 ELISA Kit

HO-1 StressXpress ELISA Kit

CATALOG #  
**AAA103771**

REACTIVITY  
**Human**

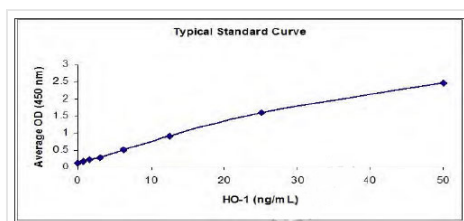
### PRODUCT SYNONYMS

HO-1; HO-1 StressXpress ELISA Kit; Heme oxygenase 1; Hemox; HMOX1; HO1; Hsp32; HO-1 ELISA; Enzyme-Linked Immunosorbent Assay; HO-1 elisa kit

### PRODUCT SPECIFICATIONS

|                         |                                                                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------|
| Reactivity              | Human                                                                                               |
| Specificity             | This assay is specific for HO-1. The HO-1 ELISA has been validated for the detection of human HO-1. |
| Detection Range         | 50 ng/mL, 25 ng/mL, 12.5 ng/mL, 6.25 ng/ mL, 3.125 ng/mL, 1.563 ng/mL, 0.781ng/mL, and 0 ng/mL      |
| Sensitivity             | 0.21 ng/mL                                                                                          |
| Preparation and Storage | 4 degree C                                                                                          |

### IMAGES



Standard Curve (Sample)

### ADDITIONAL INFORMATION

#### Related Product Information for HO-1 elisa kit

**Background/Introduction:** 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 (1). 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 (2). 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 (3). 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 (4). It has also been shown that HO-1 deficiency may cause reduced stress defense, a pro-inflammatory tendency (5), susceptibility to atherosclerotic lesion formation (6), endothelial cell injury, and growth retardation (7). Up-regulation of HO-1 is therefore said to be one of the to be one of the major defense mechanisms of oxidative stress (4).

#### Product Categories/Family for HO-1 elisa kit

Oxidative Stress

## References

1. Froh M. et al. (2007) World J. Gastroenterol 13(25): 3478-86.
2. Elbirt K.K. and Bonkovsky H.L. (1999) Proc Assoc Am Physicians 111(5): 348-47.
3. Maines M.D., Trakshel G.M., and Kutty R.K. (1986) J Biol Chem 261: 411-419.
4. Brydun A., et al. (2007) Hypertens Res 30(4): 341-8.
5. Poss K.D. and Tonegawa S. (1997). Proc Natl Acad Sci U S A. 94: 10925-10930.
6. Yet S.F., et al. (2003) FASEB J. 17: 1759-1761.
7. Yachie A., et al. (1999) J Clin Invest. 103: 129-135.

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | [contact@aaabiotech.com](mailto:contact@aaabiotech.com)

Online datasheet: <https://www.aaabiotech.com/human-elisa-kits/ho-1/103771>