



Human H-FABP Polyclonal Antibody

Antigen Affinity-Purified Rabbit Anti-Human H-FABP Antibody

Catalog Number: GR126001

Background

Heart-type fatty acid binding protein (H-FABP) also known as mammary-derived growth inhibitor, is a protein that in bovines is encoded by the *FABP3* gene.^[1] Its function is to arrest growth of mammary epithelial cells. It is also a candidate tumor suppressor for bovine breast cancer. H-FABP is a small cytoplasmic protein (15 kDa) released from cardiac myocytes following an ischemic episode.^[2] Like the nine other distinct FABPs, H-FABP is involved in active fatty acid metabolism where it transports fatty acids from the cell membrane to mitochondria for oxidation.^[2] H-FABP is a sensitive biomarker for myocardial infarction (MI)^[3] and can be detected in the blood within 1-3 hours of the pain. H-FABP is 20 times more specific to cardiac muscle than myoglobin,^[4] H-FABP is recommended to be measured with troponin to identify MI and acute coronary syndrome in patients with chest pain. H-FABP measured with troponin shows increased accuracy and sensitivity of 20.6% over troponin at 3-6 hours following chest pain onset.^[5] It rapidly release into plasma after myocardial injury - 60 minutes after an ischemic episode,^[6] and has tissue specificity. Measuring H-FABP in combination with troponin has a negative predictive value of 98%, could be used to identify those not suffering from MI at the early time point of 3-6 hours post chest pain onset.^{[5] [6]} Alongside D-dimer, NT-proBNP and peak troponin T, H-FABP was the only cardiac biomarker that proved to be a statistically significant predictor of death or MI at one year. Patients who were TnI negative but H-FABP positive had 17% increased risk of all cause mortality within one year compared to those patients who were TnI positive but H-FABP negative.^[7] H-FABP has been proven to significantly predict 30 day mortality in acute pulmonary embolism.^[8] H-FABP is more effective than Troponin T in risk stratifying Chronic Heart Failure patients.^[9]

References

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3. Tanaka T, et al. (1991). *Clinical Biochemistry* **24** (2):
4. Ghani F, et al. (2000). *Clinical Chemistry* **46** (5): 718–9.
5. Glatz JF, et al. (1994). *British Heart Journal* **71** (2): 135–40.
6. Van Nieuwenhoven FA, et al. (1995). *Circulation* **92** (10): 2848–54.
7. Viswanathan K, et al. (2010). *Journal of the American College of Cardiology* **55**: 2590–8.
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9. Niizeki T, et al. (2007). *Journal of Cardiac Failure* **13** (2): 120–7.



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Description

Species reactivity: Human

Specificity: Human H-FABP.

Source: Polyclonal rabbit IgG

Purification: Antigen Affinity purified

Immunogen: *E. coli* derived recombinant human H-FABP, Met1- Ala133,

Accession # NP_004093.1.

Endotoxin Level: <0.10 EU per 1 µg of the antibody by the LAL method.

Formulation: lyophilized from a solution containing PBS and trehalose (100 µg/ml).

Application

Reconstitution: reconstitute at 0.2 mg/ml in sterile PBS

Recommended concentration:

Western blot: >0.1 µg/ml

Immunocytochemistry: 5-15 µg/ml

ELISA: 0.2-0.6 µg/ml

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months at -20°C.
- 1 month after reconstitution at 4 °C, from date of receipt.
- 6 months after reconstitution at -20°C to -70°C from date of receipt.

DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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