

Product Specification Sheet

Fatty Acid Binding Protein-Heart/Adipocyte (FABP) Antibodies

Cat # FABP11-S	Rabbit Anti-Human FABP peptide (heart/adipocyte) antiserum # 1	Size: 100 ul
Cat # FABP11-A	Rabbit Anti-Human FABP peptide (heart/adipocyte) IgG #1, aff pure # 1	Size: 100 ul
Cat # FABP11-P	Human FABP (heart/adipocyte) Control/blocking Peptide # 1	Size: 100 ug
Cat # FABP11-C	Human heart FABP protein Western blot +ve control	Size: 100 ul

Fatty acids are important for general cellular metabolism. **FABPs (fatty acid binding proteins)** are a group of cytoplasmic, small mol wt (14-15 kDa) and proteins that has widespread tissue distribution. FABPs are quite abundant (3-5% of total cellular protein). At least 7 FABPs, FABP1-7, have been cloned and characterized from various tissues. FABPs can bind long-chain fatty acid, fatty-acid acyl-CoA and acyl-L-carnitine. Several different isoform of FABP have been identified and generally referred to by tissue type (liver, heart, intestine, adipocyte, kidney, brain etc; protein designated as H-FABP indicates that it is heart type). However, expression of these isoform is not exclusive and more than one isoform can be found in a given cell or tissue. Three main types of FABPs that were initially discovered in the heart (FABP-H), liver (FABP-L), and intestine (FABP-I) are not exclusive these tissues and show considerable differences at the amino acid level (~30% identity). Other FABPs recently detected in adipocyte, kidney, and brain show a high degree of sequence homology among each other and with other FABPs. FABPs are also known as mammary derived growth inhibitor (MDGI), adipocyte lipid binding protein (ALBP), Myelin protein P2 homolog, P2 adipocyte protein, 422 protein (P15). Human FABP-H or adipocyte is 132-aa protein (chromosome 2p11). Rat and mouse adipocyte-FABPs are 133 aa single polypeptide chains.

Source of Antigen and Antibodies

Antigen	12-aa peptide of human FABP ((heart/adipocyte); Designated (FABP11-P or control peptide) conjugated to KLH; epitope location ~ C-terminus
Ab Format	Rabbit, polyclonal unpurified antiserum (cat # FABP11-S) and purified over antigen-agarose column (cat # FABP11-A)
2-Ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human FABP-H (from heart) was purified (>98%) from donors that tested -ve for HIV/hepatitis. For **western blot +ve control (Cat # FABP11-C)**, it is supplied in SDS-PAGE sample buffer (reduced). Load ~10 ul/lane to visualize with appropriate antibodies. Store at -20oC in suitable aliquots. Avoid repeated thawing or heating. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **FABP11-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Do not freeze, thaw, or heat repeatedly

Recommended Usage

Western Blot - It is recommended that researchers tests antisera, controls, and determine their own optimal dilutions. A preliminary antibody dilution of 1K-5K for Western (~15-16 Kda).

1:500-1K for **Histochemistry** 1:1K-10K for **ELISA**.

Antibody crossreactivity and specificity

The FABP11-P peptide sequence homology has 100% homology with 132 aa human adipocyte lipid binding protein (hALBP) and mouse/rat H-FABPs, 91% homology with human muscle FABP, pig and bovine H-FABPs. No significant homology is seen with other isoforms of FABPs. The FABP11-P sequence is also quite conserved in species as diverse as fish and C. elegans FABP. Antibody crossreactivity in various species and isoforms has not been studies. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity.

General References: (1) Bernlohr DA (1984) PNAS 81, 5468; Phillips M (1986) JBC 261, 10821; Hunt CB (1986) PNAS 83, 3786; Cook JS (1988) PNAS 85, 2949; Xu Z (1993) JBC 268, 7874; Baxa CA (1989) Biochem 28, 8683

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer: PBS+0.1% BSA**
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage
Short-term: unopened, undiluted liquid vials at -200C and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

All products are for in vitro research use only.

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