**Human Hormone-sensitive Lipase/HSL Antibody**

**Antigen Affinity-purified Polyclonal Sheep IgG**

**Catalog Number:** AF7104

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### DESCRIPTION

**Species Reactivity**
- Human

**Specificity**
- Detects human Hormone-sensitive Lipase/HSL in direct ELISAs and Western blots.

**Source**
- Polyclonal Sheep IgG

**Purification**
- Antigen Affinity-purified

**Immunogen**
- *E. coli*‐derived recombinant human Hormone-sensitive Lipase/HSL
- Met302-Leu425
- Accession # Q05469

**Formulation**
- Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.*

### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th><strong>Recommended Concentration</strong></th>
<th><strong>Sample</strong></th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>1 μg/mL</td>
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**See Below**

### DATA

**Western Blot**

Detection of Human Hormone-sensitive Lipase/HSL by Western Blot. Western blot shows lysates of human heart tissue. PVDF membrane was probed with 1 μg/mL of Sheep Anti-Hormone-sensitive Lipase/HSL Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7104) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Hormone-sensitive Lipase/HSL at approximately 90 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### PREPARATION AND STORAGE

**Reconstitution**
- Sterile PBS to a final concentration of 0.2 mg/mL

**Shipping**
- The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
  
  *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.*

**Stability & Storage**
- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
  
  - 12 months from date of receipt, -20 to -70 °C as supplied.
  - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
  - 6 months, -20 to -70 °C under sterile conditions after reconstitution.

### BACKGROUND

**LIPE** (also known as hormone sensitive lipase/HSL) is a 88-90 kDa member of the GDXG lipolytic enzyme family of molecules. It is expressed in multiple cell types, including skeletal muscle, adrenal gland and adipocytes, and is regulated by a series of phosphorylations. Catecholamines activate the enzyme via PKA through the phosphorylation of Ser853, Ser855, and Ser951, while insulin depresses its activity via PDE3B. LIPE acts on triglycerides to release free fatty acids, and serves as a retinyl ester hydrolase. Human LIPE is 1076 amino acids (aa) in length, and contains one HSL domain (aa 302-616). This restricted 116 kDa isoform is found in testis (spermatids). There are additional isoform variants. One is 88-90 kDa in size in SDS-Page and possesses an alternative start site to the long form at Met302. This is considered the standard and most common LIPE isoform. A second is approximately 93 kDa in size and contains a 39 aa substitution for aa 1-294. A third isoform is 80 kDa in size and shows a 76 aa deletion in the center of the molecule, reducing its enzymatic activity. It is suggested that LIPE may act as both a monomer and homodimer. Over aa 302-425, human HSL shares 92-93% aa identity with both mouse and rat LIPE.