

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	<i>E. coli</i> -derived recombinant human Hormone-sensitive Lipase/HSL Met302-Leu425 Accession # Q05469
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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