

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Placental Lactogen/CSH1 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 658234
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line CHO-derived human Placental Lactogen/CSH1 Val27-Phe217 Accession # P01243
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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.

Neutralization 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

Human Placental Lactogen (abbreviated PL or hPL), also called Chorionic Somatomammotropin Hormone 1 (abbreviated CSH1), is a member of the prolactin/growth hormone (PRL/GH) family (1). It is found in a cluster of growth hormones on chromosome 17 that appear to have a common ancestry. Identical 191 amino acid (aa) mature hPL proteins may be formed from one of two genes (2). PL contains a pair of C-terminal cysteines that may form either intra- or interchain disulfides. Human PL shares 98% aa identity with chimpanzee PL and >85% aa sequence identity with other human growth hormones, but only ~25% aa identity with mouse, ovine or bovine PL. PL is mainly expressed by cells in the syncytiotrophoblast layer of the placenta, which produce increasing amounts of PL as pregnancy proceeds. The major portion enters the maternal circulation, where it joins GH2 (placenta-specific GH) in replacing the functions of pituitary GH during pregnancy. A smaller amount of PL circulates in the fetus. Primate PL shows high affinity for the PRL receptor and low affinity for the GH receptor (1). Reduced stimulation of PL by angiotensin 2 correlates with intrauterine growth restriction (3). There is some evidence that mature angiogenic PL may be cleaved to form an anti-angiogenic N-terminal fragment (4). Although PL promotes pancreatic beta cell survival, it does not appear to be altered in gestational diabetes. It helps prepare mammary for lactation, but probably does not influence lactation itself. PL may be a ligand of stabilin-1, which has been proposed to regulate PL internalization and degradation or re-expression (6).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.