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Product datasheet

Human LIFR ELISA Kit ab213806

1 Image

Overview

Product name Human LIFR ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
1	16	289pg/ml	16.76	= 5.8%
2	16	1861pg/ml	91.18	= 4.9%
3	16	6421pg/ml	276.1	= 4.3%

Inter-assay

Sample	n	Mean	SD	CV%
1	24	261pg/ml	16.7	= 6.4%
2	24	1769pg/ml	107.9	= 6.1%
3	24	6236pg/ml	386.63	= 6.2%

Sample type Cell culture supernatant, Serum, Cell Lysate, Hep Plasma, EDTA Plasma

Assay type Sandwich (quantitative)

Sensitivity < 10 pg/ml

Range 156 pg/ml - 10000 pg/ml

Assay time 3h 30m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview The Human LIFR Enzyme-Linked Immunosorbent Assay (ELISA) kit (ab213806) is designed for the quantitative detection of Human LIFR in cell culture supernatants, cell lysates, serum and plasma (heparin, EDTA).

The ELISA kit is based on standard sandwich enzyme-linked immunosorbent assay technology. A

monoclonal antibody from mouse specific for LIFR has been pre-coated onto 96-well plates. Standards (Expression system for standard: NSO; Immunogen sequence: Q45-S833) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for LIFR is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human LIFR amount of sample captured in plate.

Notes

LIFR, also known as CD118 (Cluster of Differentiation 118), is a subunit of a receptor for leukemia inhibitory factor. This gene encodes a protein that belongs to the type I cytokine receptor family. It is mapped to 5p31.1. The LIF receptor (LIFR) is the low-affinity binding chain that, together with the high-affinity converter subunit gp130, forms a high-affinity receptor complex that mediates the action of the leukemia-inhibitory factor. LIF is a polyfunctional cytokine that affects the differentiation, survival and proliferation of a wide variety of cells in the adult and the embryo. Mutations in this gene cause Schwartz-Jampel syndrome type 2, a disease belonging to the group of the bent-bone dysplasias. A translocation that involves the promoter of this gene, together with the pleiomorphic adenoma gene 1, is associated with salivary gland pleiomorphic adenoma, a common type of benign epithelial tumor of the salivary gland.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

Store at -20°C. Please refer to protocols.

Components	Identifier	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml
Adhesive Plate Seal		4 units
Antibody Diluent Buffer	Green Cap	1 x 12ml
Anti-Human LIFR coated Microplate (12 x 8 wells)		1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 100µl
Biotinylated anti-Human LIFR antibody		1 x 100µl
Lyophilized recombinant Human LIFR standard		2 vials
Sample Diluent Buffer	Green Cap	1 x 30ml
TMB Color Developing Agent	Black Cap	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml

Function

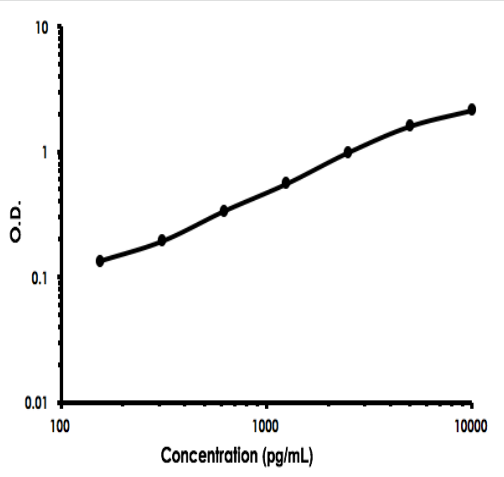
Signal-transducing molecule. May have a common pathway with IL6ST. The soluble form inhibits the biological activity of LIF by blocking its binding to receptors on target cells.

Involvement in disease

Defects in LIFR are the cause of Stueve-Wiedemann syndrome (SWS) [MIM:601559]; also knowns as Schwartz-Jampel syndrome type 2 (SJS2). SWS is a severe autosomal recessive condition and belongs to the group of the bent-bone dysplasias. SWS is characterized by bowing

	of the lower limbs, with internal cortical thickening, wide metaphyses with abnormal trabecular pattern, and camptodactyly. Additional features include feeding and swallowing difficulties, as well as respiratory distress and hyperthermic episodes, which cause death in the first months of life. The rare survivors develop progressive scoliosis, spontaneous fractures, bowing of the lower limbs, with prominent joints and dysautonomia symptoms, including temperature instability, absent corneal and patellar reflexes, and smooth tongue. Note=A chromosomal aberration involving LIFR is found in salivary gland pleiomorphic adenomas, the most common benign epithelial tumors of the salivary gland. Translocation t(5;8)(p13;q12) with PLAG1.
Sequence similarities	Belongs to the type I cytokine receptor family. Type 2 subfamily. Contains 6 fibronectin type-III domains.
Domain	The WSXWS motif appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding. The box 1 motif is required for JAK interaction and/or activation.
Cellular localization	Secreted and Cell membrane.

Images



Human LIFR ELISA Kit (ab213806) Standard Curve

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