

Product datasheet

Human NRG1 beta 1 ELISA Kit ab100614

1 References [画像数 2](#)

製品の概要

製品名	Human NRG1 beta 1 ELISA Kit
検出方法	Colorimetric
サンプルの種類	Cell culture supernatant, Plasma
アッセイタイプ	Sandwich (quantitative)
検出感度	< 50 pg/ml
検出範囲	82.3 pg/ml - 20000 pg/ml
添加回収試験	99 %

特定サンプルでの回収試験

サンプルの種類	平均 %	測定範囲
Cell culture supernatant	114.9	102% - 123%
Plasma	86.02	79% - 94%

ステップ Multiple steps standard assay

種交差性 交差種: Human

製品の概要

Abcam's Human NRG1 beta 1 ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of Human NRG1 beta 1 in plasma, and cell culture supernatants. (Collect plasma using EDTA or citrate as an anticoagulant. Heparinized plasma is not recommended. Human NRG1 beta 1 concentration is pretty low in normal plasma, it may not be detected in this assay).

This assay employs an antibody specific for Human NRG1 beta 1 coated on a 96-well plate. Standards and samples are pipetted into the wells and NRG1 beta 1 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of NRG1 beta 1 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

We have not been able to detect endogenous Human NRG1 beta 1 in normal serum with

ab100614, only in serum spiked with Human NRG1 beta 1.

特記事項

Optimization may be required with urine samples

アプリケーション

適用あり: Sandwich ELISA

試験プラットフォーム

Microplate

製品の特性

保存方法

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

内容	1 x 96 tests
20X Wash Buffer Concentrate	1 x 25ml
5X Assay Diluent B	1 x 15ml
500X HRP-Streptavidin Concentrate	1 x 200µl
Assay Diluent A	1 x 30ml
Biotinylated anti-Human NRG1 beta 1 (lyophilized)	2 vials
NRG1 beta 1 Microplate (12 x 8 wells)	1 unit
Recombinant Human NRG1 beta 1 Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

機能

Direct ligand for ERBB3 and ERBB4 tyrosine kinase receptors. Concomitantly recruits ERBB1 and ERBB2 coreceptors, resulting in ligand-stimulated tyrosine phosphorylation and activation of the ERBB receptors. The multiple isoforms perform diverse functions such as inducing growth and differentiation of epithelial, glial, neuronal, and skeletal muscle cells; inducing expression of acetylcholine receptor in synaptic vesicles during the formation of the neuromuscular junction; stimulating lobuloalveolar budding and milk production in the mammary gland and inducing differentiation of mammary tumor cells; stimulating Schwann cell proliferation; implication in the development of the myocardium such as trabeculation of the developing heart. Isoform 10 may play a role in motor and sensory neuron development.

組織特異性

Type I isoforms are the predominant forms expressed in the endocardium. Isoform alpha is expressed in breast, ovary, testis, prostate, heart, skeletal muscle, lung, placenta liver, kidney, salivary gland, small intestine and brain, but not in uterus, stomach, pancreas, and spleen. Isoform 3 is the predominant form in mesenchymal cells and in non-neuronal organs, whereas isoform 6 is the major neuronal form. Isoform 8 is expressed in spinal cord and brain. Isoform 9 is the major form in skeletal muscle cells; in the nervous system it is expressed in spinal cord and brain. Also detected in adult heart, placenta, lung, liver, kidney, and pancreas. Isoform 10 is expressed in nervous system: spinal cord motor neurons, dorsal root ganglion neurons, and brain. Predominant isoform expressed in sensory and motor neurons. Not detected in adult heart, placenta, lung, liver, skeletal muscle, kidney, and pancreas. Not expressed in fetal lung, liver and kidney. Type IV isoforms are brain-specific.

関連疾患

Note=A chromosomal aberration involving NRG1 produces gamma-heregulin. Translocation

t(8;11) with ODZ4. The translocation fuses the 5'-end of ODZ4 to NRG1 (isoform 8). The product of this translocation was first thought to be an alternatively spliced isoform. Gamma-heregulin is a soluble activating ligand for the ERBB2-ERBB3 receptor complex and acts as an autocrine growth factor in a specific breast cancer cell line (MDA-MB-175). Not detected in breast carcinoma samples, including ductal, lobular, medullary, and mucinous histological types, neither in other breast cancer cell lines.

配列類似性

Belongs to the neuregulin family.
Contains 1 EGF-like domain.
Contains 1 Ig-like C2-type (immunoglobulin-like) domain.

発生段階

Detectable at early embryonic ages. Isoform 10 is highly expressed in developing spinal motor neurons and in developing cranial nerve nuclei. Expression is maintained only in both adult motor neurons and dorsal root ganglion neurons. Type IV isoforms are expressed in fetal brain.

ドメイン

The cytoplasmic domain may be involved in the regulation of trafficking and proteolytic processing. Regulation of the proteolytic processing involves initial intracellular domain dimerization.

ERBB receptor binding is elicited entirely by the EGF-like domain.

翻訳後修飾

Proteolytic cleavage close to the plasma membrane on the external face leads to the release of the soluble growth factor form.

N- and O-glycosylated. Extensive glycosylation precedes the proteolytic cleavage.

細胞内局在

Secreted; Cell membrane. Does not seem to be active; Membrane. May possess an internal uncleaved signal sequence; Nucleus. May be nuclear and Secreted. Has a signal peptide.

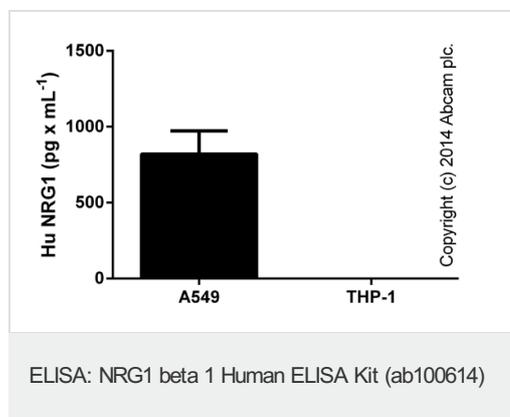
アプリケーション

Our [Abpromise guarantee](#) covers the use of **ab100614** in the following tested applications.

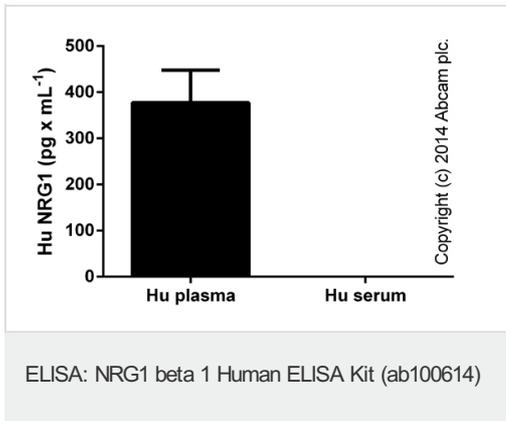
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション	Abreviews	特記事項
Sandwich ELISA		Use at an assay dependent concentration.

画像



NRG1 beta measured in culture supernatants,
THP-1 levels below level of detection
(duplicates +/- SD).



NRG1 beta measured in human biological fluids; signals from serum and from rat and mouse samples were below level of detection (duplicates +/- SD).

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