abcam

Product datasheet

Human GRN (Granulin) knockout HEK-293T cell lysate ab257235

3 Images

Overview

Product name	Human GRN (Granulin) knockout HEK-293T cell lysate
Product overview	Knockout cell lysate achieved by CRISPR/Cas9.
Parental Cell Line	HEK293T
Organism	Human
Mutation description	Knockout achieved by using CRISPR/Cas9, 14 bp deletion in exon2 and 2 bp deletion in exon2.
Passage number	<20
Knockout validation	Sanger Sequencing, Western Blot (WB)
Reconstitution notes	To use as WB control, resuspend the lyophilizate in 50 µL of LDS* Sample Buffer to have a final concentration of 2 mg/ml. For reducing conditions, we recommend a final concentration of 0.1 M DTT. **Usage of SDS sample buffer is not recommended with these lyophilized lysates.*
Notes	**Lysate preparation:** Our lysates are made using RIPA buffer to which we add a protease inhibitor cocktail and phosphatase inhibitor cocktail (ratio: 300:100:10). *This means that the protein of interest is denatured.* If you require a native form of the protein please use the live cell version - found **here**. Please refer to our lysis protocol for further details on how our lysates are prepared. **User storage instructions:** Lyophilizate may be stored at 4°C. After reconstitution, store at -20°C for short-term storage or -80°C for long-term storage. Access thousands of knockout cell lysates, generated from commonly used cancer cell lines. **See here for more information on knockout cell lysates.** Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses. This product is subject to limited use licenses from The Broad Institute and ERS Genomics Limited, and is developed with patented technology. For full details of the limited use licenses and relevant patents please refer to our **limited use license** and **patent pages**.
Tested applications	**Suitable for:** WB

Properties

Storage instructions Store at -80°C. Please refer to protocols.

Components	1 kit
ab262021 - Human GRN knockout HEK293T cell lysate	1 x 100µg
ab255553 - Human wild-type HEK293T cell lysate	1 x 100µg

Cell type epithelial

STR Analysis Amelogenin X D5S818: 8, 9 D13S317: 12, 14 D7S820: 11 D16S539: 9, 13 vWA: 16, 19 TH01: 7, 9.3 TPOX: 11 CSF1PO: 11, 12

Target

Function Granulins have possible cytokine-like activity. They may play a role in inflammation, wound repair, and tissue remodeling.
Granulin-4 promotes proliferation of the epithelial cell line A431 in culture while granulin-3 acts as an antagonist to granulin-4, inhibiting the growth.

Tissue specificity In myelogenous leukemic cell lines of promonocytic, promyelocytic, and proerythroid lineage, in fibroblasts, and very strongly in epithelial cell lines. Present in inflammatory cells and bone marrow. Highest levels in kidney.

Involvement in disease Defects in GRN are the cause of ubiquitin-positive frontotemporal dementia (UP-FTD) [MIM:607485]; also known as tau-negative frontotemporal dementia linked to chromosome 17. Frontotemporal dementia (FTD) is the second most common cause of dementia in people under the age of 65 years. It is an autosomal dominant neurodegenerative disease.

Sequence similarities Belongs to the granulin family.

Post-translational modifications Granulins are disulfide bridged.

Cellular localization Secreted.

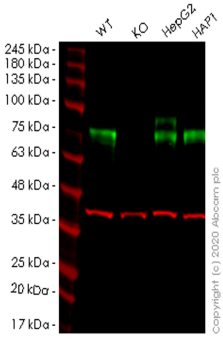
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab257235 in the following tested applications.

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

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 64 kDa.

Images



Western blot - Human GRN knockout HEK293T cell lysate (ab257235)

Lane 1: Wild-type HEK293T cell lysate (20 ug)
Lane 2: GRN knockout HEK293T cell lysate (20 ug)
Lane 3: HepG2 cell lysate (20 ug)
Lane 4: HAP1cell lysate (20 ug)

ab208777 was shown to specifically react with Granulin in wild-type HEK293T cells. Loss of signal was observed when knockout cell line **ab266738** (knockout cell lysate ab257235) was used. Wild-type and Granulin knockout samples were subjected to SDS-PAGE. **ab208777** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated at room temperature for 2.5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

Sanger Sequencing - Human GRN knockout HEK293T cell lysate (ab257235)

Allele-1: 14 bp deletion in exon2

Sanger Sequencing - Human GRN knockout HEK293T cell lysate (ab257235)

Allele-2: 2 bp deletion in exon2

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