

Product datasheet

Human SOD2 (MnSOD) knockout HEK-293T cell lysate ab263835

3 Images

Overview

Product name	Human SOD2 (MnSOD) 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, 16 bp deletion in exon2 and 1 bp insertion 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. <i>*Usage of SDS sample buffer is not recommended with these lyophilized lysates.</i>

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.](#)

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Tested applications

Suitable for: WB

Properties

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

Components	1 kit
ab255538 - Human SOD2 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 Destroys superoxide anion radicals which are normally produced within the cells and which are toxic to biological systems.

Involvement in disease Genetic variation in SOD2 is associated with susceptibility to microvascular complications of diabetes type 6 (MVCD6) [MIM:612634]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.

Sequence similarities Belongs to the iron/manganese superoxide dismutase family.

Post-translational modifications Nitrated under oxidative stress. Nitration coupled with oxidation inhibits the catalytic activity.

Cellular localization Mitochondrion matrix.

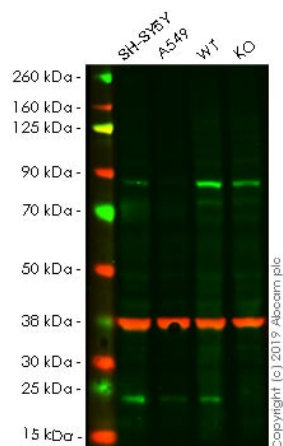
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab263835 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.

Images



Western blot - Human SOD2 knockout HEK293T cell lysate (ab263835)

Lane 1: SH-SY5Y cell lysate (20 µg)

Lane 2: A549 cell lysate (20 µg)

Lane 3: Wild-type HEK-293T cell lysate (20 µg)

Lane 4: SOD2 knockout HEK-293T cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - **ab68155** observed at 22 kDa. Red - loading control, **ab8245** observed at 37 kDa.

ab68155 was shown to react with SOD2/MnSOD in wild-type HEK-293T. Loss of signal was observed when knockout cell line **ab255434** (knockout cell lysate ab263835) was used. Wild-type and SOD2/MnSOD knockout samples were subjected to SDS-PAGE. **ab68155** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C 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.

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Mut  GACGTT CAGGTT GTTCAC ..... TTGCTGTGGTGCAGCTGCATGATCTG
      |||||
WT   GACGTT CAGGTT GTTCACGTAGGCCGCGTGGTGCTTGCTGTGGTGCAGCTGCATGATCTG

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Sanger Sequencing - Human SOD2 knockout HEK293T cell lysate (ab263835)

Allele-1: 16 bp deletion in exon2

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Mut  GACGTT CAGGTT GTTCACTGTAGGCCGCGTGGTGCTTGCTGTGGTGCAGCTGCATGATCT
      |||||
WT   GACGTT CAGGTT GTTCACTGTAGGCCGCGTGGTGCTTGCTGTGGTGCAGCTGCATGATCT

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Sanger Sequencing - Human SOD2 knockout HEK293T cell lysate (ab263835)

Allele-2: 1 bp insertion in exon2

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