

CAS (24): sc-135855

BACKGROUND

Cellular apoptosis susceptibility protein (CAS), also called Exportin 2, is a 971 amino acid member of the CSE1 family. CAS mediates Importin α re-export from the nucleus to the cytoplasm after import substrates have been released into the nucleoplasm. In the nucleus, CAS binds cooperatively to Importin α and to the GTPase Ran in its GTP-bound (active) form. This complex binds to nucleoporins as it docks to the nuclear pore complex. Once in the cytoplasm, the complex dissociates and Importin α is released and CAS returns to the nuclear compartment and the process begins anew. CAS can be detected highly in proliferating cells. Three isoforms of CAS have been named due to alternative splicing. Isoform 1 is the full length, 971 amino acid protein. Isoform 2 contains an alternative sequence for amino acids 190-195 and is missing amino acids 196-971. Isoform 3 contains an alternative sequence for amino acids 943-945 and is missing amino acids 946-971.

REFERENCES

- Hengartner, M.O. 1995. Out-of-body experiences: cell-free cell death. *Bioessays* 17: 549-552.
- Kroemer, G., et al. 1995. The biochemistry of programmed cell death. *FASEB J.* 9: 1277-1287.
- King, K.L., et al. 1995. Cell cycle and apoptosis: common pathways to life and death. *J. Cell. Biochem.* 58: 175-180.

CHROMOSOMAL LOCATION

Genetic locus: CSE1L (human) mapping to 20q13.13; Cse1l (mouse) mapping to 2 H3.

SOURCE

CAS (24) is a mouse monoclonal antibody raised against amino acids 64-81 of CAS of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CAS (24) is recommended for detection of CAS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CAS siRNA (h): sc-29908, CAS siRNA (m): sc-29909, CAS shRNA Plasmid (h): sc-29908-SH, CAS shRNA Plasmid (m): sc-29909-SH, CAS shRNA (h) Lentiviral Particles: sc-29908-V and CAS shRNA (m) Lentiviral Particles: sc-29909-V.

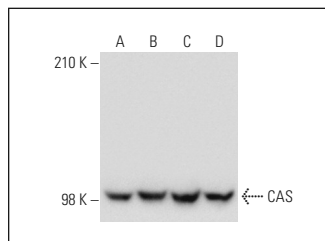
Molecular Weight of CAS: 100 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, SW480 nuclear extract: sc-2155 or MOLT-4 nuclear extract: sc-2151.

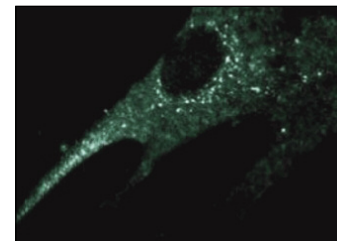
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



CAS (24): sc-135855. Western blot analysis of CAS expression in SW480 (A), MOLT-4 (B), HeLa (C) and MCF7 (D) nuclear extracts.



CAS (24): sc-135855. Immunofluorescence staining of human fibroblast cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Jiang, M.C., et al. 2013. CSE1L modulates Ras-induced cancer cell invasion: correlation of K-Ras mutation and CSE1L expression in colorectal cancer progression. *Am. J. Surg.* 206: 418-427.
- Tai, C.J., et al. 2013. Correlations between cytoplasmic CSE1L in neoplastic colorectal glands and depth of tumor penetration and cancer stage. *J. Transl. Med.* 11: 29.
- Schertzer, M., et al. 2015. Human regulator of telomere elongation helicase 1 (RTEL1) is required for the nuclear and cytoplasmic trafficking of pre-U2 RNA. *Nucleic Acids Res.* 43: 1834-1847.
- Lee, W.R., et al. 2015. Early decline in serum phospho-CSE1L levels in vemurafenib/sunitinib-treated melanoma and sorafenib/lapatinib-treated colorectal tumor xenografts. *J. Transl. Med.* 13: 191.
- Lee, W.R., et al. 2015. CSE1L Links cAMP/PKA and Ras/ERK pathways and regulates the expressions and phosphorylations of ERK1/2, CREB, and MITF in melanoma cells. *Mol. Carcinog.* E-published.

RESEARCH USE

For research use only, not for use in diagnostic procedures. Not for resale.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.