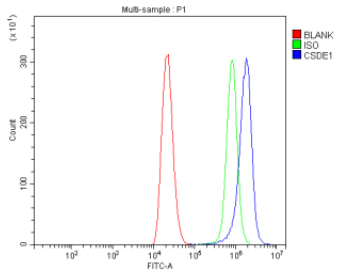
CSDE1 Antibody / Cold shock domain-containing E1 (FY12960)

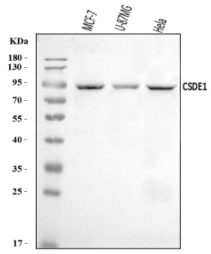
Catalog No.	Formulation	Size
FY12960	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O75534
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Western Blot : 0.25-0.5ug/ml
Limitations	This CSDE1 antibody is available for research use only.



Flow Cytometry analysis of THP-1 cells using anti-CSDE1 antibody. Overlay histogram showing THP-1 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CSDE1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of CSDE1/NRU using anti-CSDE1 antibody. Lane 1: human MCF-7 whole cell lysates, Lane 2: human U-87MG whole cell lysates, Lane 3: human Hela whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CSDE1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for CSDE1/NRU at approximately 89 kDa. The expected molecular weight of CSDE1/NRU is at 89 kDa.

Description

CSDE1 antibody detects Cold shock domain-containing E1, an RNA-binding protein that regulates mRNA stability, translation, and stress response. The UniProt recommended name is Cold shock domain-containing protein E1 (CSDE1), also known as UNR (upstream of N-ras). This multifunctional RNA-binding factor modulates gene expression at post-transcriptional levels and participates in stress granule dynamics, cell differentiation, and viral replication control.

Functionally, CSDE1 antibody recognizes a 794-amino-acid protein containing five cold-shock domains (CSDs) that mediate single-stranded RNA binding. CSDE1 interacts with translation initiation factors and RNA helicases to regulate both cap-dependent and internal ribosome entry site (IRES)-mediated translation. It influences the expression of key regulatory proteins involved in cell growth, apoptosis, and stress adaptation. Through its control of mRNA turnover and translation, CSDE1 coordinates cellular response to nutrient deprivation, hypoxia, and oxidative stress.

The CSDE1 gene is located on chromosome 1p13.2 and is highly expressed in neurons, germ cells, and proliferating tissues. It associates with messenger ribonucleoprotein (mRNP) complexes and localizes to cytoplasmic granules under stress conditions. CSDE1 regulates the translation of c-Fos, Apaf1, and XIAP mRNAs, thereby balancing apoptosis and survival pathways. It also contributes to differentiation processes in embryonic stem cells and neuronal precursors through translational control mechanisms.

In virology, CSDE1 plays a dual role as a host factor that both supports and restricts viral replication, depending on the virus type. For example, it facilitates poliovirus IRES-mediated translation but limits the replication of certain RNA viruses by sequestering viral transcripts. In cancer, dysregulated CSDE1 expression promotes oncogenic translation programs, including MYC and PTEN pathway regulation. Its overexpression correlates with increased metastasis and poor prognosis in melanoma and prostate cancer.

CSDE1 antibody is used for immunoblotting, immunocytochemistry, and RNA immunoprecipitation to study RNA-protein interactions, translation control, and stress response mechanisms. In neuronal models, CSDE1 localization shifts dynamically between cytoplasm and stress granules, reflecting its regulatory versatility. Structural analyses reveal that each CSD contributes distinct RNA-binding affinities, allowing CSDE1 to recognize a broad spectrum of RNA targets and adapt to various signaling environments.

NSJ Bioreagents provides CSDE1 antibody reagents validated for applications in RNA biology, stress response, and translational regulation. These antibodies support research into mRNA metabolism, neuronal development, and cancer biology.

Application Notes

Optimal dilution of the CSDE1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human CSDE1/NRU recombinant protein (Position: M1-Q775) was used as the immunogen for the CSDE1 antibody.

Storage

After reconstitution, the CSDE1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.