Data Sheet (Cat.No.TMAH-00813)

TargetMol

Anti-NFE2L2 Antibody (9K94)

Product Details

Ig Type:	IgG2b
Reactivity:	Human, Mouse
Conjugation:	Unconjugated
Clone:	9K94
Purification:	Protein G purified

Applications

Verified Activity:

1. Western Blot
-Positive WB detected in: NFE2L2 antibody at 1:1000
-Lane 1: Hela whole cell lysate
-Lane 2: THP-1 whole cell lysate
-Lane 3: HepG2 whole cell lysate
-Lane 4: NIH/3T3 whole cell lysate
-Lane 5: RAW264.7 whole cell lysate
-Lane 6: K562 whole cell lysate
-Secondary: Goat polyclonal to Mouse IgG at 1/20000 dilution
-Predicted band size: 68 KDa
-Observed band size: 68-100 KDa
-Exposure time: 1min
2. IHC image of TMAH-00813 diluted at 1:100 and staining in paraffin-embedded human breast cancer tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight, and detected by a Goat anti-mouse IgG polymer labeled by HRP and visualized using 0.05% DAB.
3. IHC image of TMAH-00813 diluted at 1:100 and staining in paraffin-embedded human pancreatic cancer tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at 37°C. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-mouse IgG labeled by HRP and visualized using 0.05% DAB.
4. Immunofluorescence staining of NIH/3T3 cells with TMAH-00813 at 1:150, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Mouse IgG (H+L).
5. Immunofluorescence staining of HepG2 cells with TMAH-00813 at 1:150, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Mouse IgG (H+L).
6. Overlay Peak curve showing Hela cells stained with TMAH-00813 (red line) at 1:100. The cells were incubated in 10% normal goat serum to block non-specific protein-protein interactions

followed by the antibody (1μg/1*106cells) for 1h at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-Mouse IgG(H+L) at 1/100 dilution for 30min at 4°C. Isotype control antibody (green line) was mouse IgG1 (1μg/1*106cells) used under the same conditions. Acquisition of >10,000 events was performed.
7. Overlay Peak curve showing HepG2 cells stained with TMAH-00813 (red line) at 1:100. The cells were incubated in 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1μg/1*106cells) for 1h at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-Mouse IgG(H+L) at 1/100 dilution for 30min at 4°C. Isotype control antibody (green line) was mouse IgG1 (1μg/1*106cells) used under the same conditions. Acquisition of >10,000 events was performed.

Application: ELISA,FCM,IF,IHC,WB

Properties

Purity: >95%

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: Recombinant Protein: Human Nuclear factor erythroid 2-related factor 2 Protein (256-605AA)

Antigen Species: Human

Gene ID: 4780

Uniprot ID: Q16236

Biology Area: Signal Transduction

Research Background

Transcription factor that plays a key role in the response to oxidative stress: binds to antioxidant response (ARE) elements present in the promoter region of many cytoprotective genes, such as phase 2 detoxifying enzymes, and promotes their expression, thereby neutralizing reactive electrophiles. In normal conditions, ubiquitinated and degraded in the cytoplasm by the BCR(KEAP1) complex. In response to oxidative stress, electrophile metabolites inhibit activity of the BCR(KEAP1) complex, promoting nuclear accumulation of NFE2L2/NRF2, heterodimerization with one of the small Maf proteins and binding to ARE elements of cytoprotective target genes. The NFE2L2/NRF2 pathway is also activated in response to selective autophagy: autophagy promotes interaction between KEAP1 and SQSTM1/p62 and subsequent inactivation of the BCR(KEAP1) complex, leading to NFE2L2/NRF2 nuclear accumulation and expression of cytoprotective genes. May also be involved in the transcriptional activation of genes of the beta-globin cluster by mediating enhancer activity of hypersensitive site 2 of the beta-globin locus control region. Plays also an important role in the regulation of the innate immune response and antiviral cytosolic DNA sensing. It is a critical regulator of the innate immune response and survival during sepsis by maintaining redox homeostasis and restraint of the dysregulation of proinflammatory signaling pathways like MyD88-dependent and -independent and TNF-alpha signaling. Suppresses macrophage inflammatory response by blocking proinflammatory cytokine transcription and the induction of IL6. Binds to the proximity of proinflammatory genes in macrophages and inhibits RNA Pol II recruitment. The inhibition is independent of the NRF2-binding motif and reactive oxygen species level. Represses antiviral cytosolic DNA sensing by suppressing the expression of the adapter protein STING1 and decreasing responsiveness to STING1 agonists while increasing susceptibility to infection with DNA viruses. Once activated, limits the release of pro-inflammatory cytokines in response to human coronavirus SARS-CoV-2 infection and to virus-derived ligands through a mechanism that involves inhibition of IRF3 dimerization. Also inhibits both SARS-CoV-2 replication, as well as the replication of several other pathogenic viruses including Herpes Simplex Virus-1 and-2, Vaccinia virus, and Zika virus through a type I interferon (IFN)-independent mechanism.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481