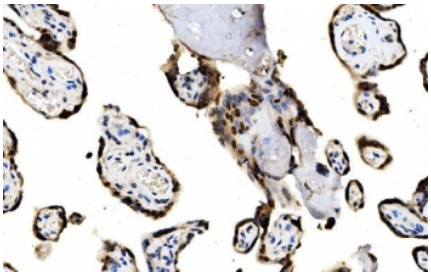
MAFF Antibody / Transcription factor MafF (RQ8093)

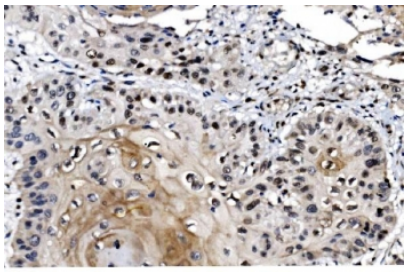
Catalog No.	Formulation	Size
RQ8093	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

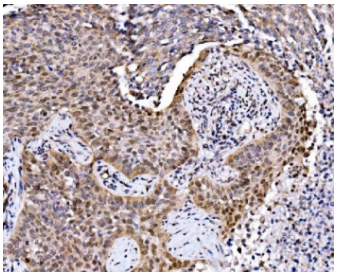
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9ULX9
Localization	Nuclear
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This MAFF antibody is available for research use only.



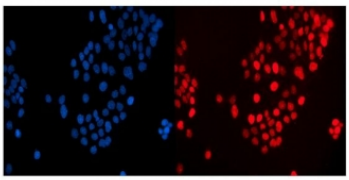
IHC staining of FFPE human placental tissue with MAFF antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



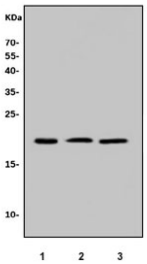
IHC staining of FFPE human esophageal squamous carcinoma tissue with MAFF antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



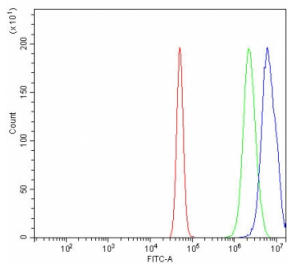
IHC staining of FFPE human lung cancer tissue with MAFF antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunofluorescent staining of FFPE human A431 cells with MAFF antibody (red) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of human 1) HepG2, 2) U-2 OS and 3) PC-3 cell lysate with MAFF antibody. Predicted molecular weight ~18 kDa.



Flow cytometry testing of fixed and permeabilized human A431 cells with MAFF antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= MAFF antibody.

Description

MAFF antibody targets Transcription factor MafF (MAFF), a small Maf family basic leucine zipper transcription factor that regulates gene expression by forming homo- or heterodimers with other Maf proteins or CNC family transcription factors. MAFF localizes predominantly to the nucleus, where it binds Maf recognition elements in promoter and enhancer regions to modulate transcriptional programs linked to stress responses, redox balance, and cellular differentiation. As a small Maf protein, MAFF lacks a classical transactivation domain and instead functions as a context-dependent regulator through partner selection and DNA binding.

Functionally, MAFF participates in transcriptional regulation associated with oxidative stress, detoxification pathways, and

metabolic homeostasis. By dimerizing with CNC proteins such as Nrf2, MAFF contributes to regulation of antioxidant response element-driven genes involved in cellular defense and redox control. MAFF expression is inducible under stress conditions, enabling cells to adapt transcriptional outputs in response to environmental and metabolic challenges. A MAFF antibody supports studies examining transcriptional regulation and stress-responsive signaling pathways.

MAFF also plays roles in developmental and tissue-specific gene regulation. Its expression has been reported in multiple tissues, with dynamic regulation depending on cellular state and differentiation stage. Through competitive dimerization, MAFF can either activate or repress target gene expression, providing fine control over transcriptional networks. These properties make MAFF a useful marker for investigating transcription factor interactions and regulatory balance within bZIP-mediated gene control systems.

From a biological and disease-relevance perspective, MAFF has been studied in the context of oxidative stress responses, inflammation, and cancer-associated transcriptional remodeling. Altered MAFF expression or dimerization balance can influence antioxidant capacity and cellular adaptation to stress, impacting tissue homeostasis and disease progression. Understanding MAFF regulation provides insight into how cells integrate environmental signals into transcriptional responses.

At the molecular level, MAFF is encoded by the MAFF gene and produces a protein of approximately 164 amino acids. The protein contains a conserved basic region for DNA binding and a leucine zipper domain for dimerization. Regulation of MAFF activity depends on expression level, dimerization partners, and cellular signaling context. A MAFF antibody supports research applications focused on transcriptional regulation, oxidative stress biology, and gene expression control, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

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

Immunogen

E. coli-derived recombinant human protein (amino acids M1-L37) was used as the immunogen for the MAFF antibody.

Storage

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

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