

## Anti-Midkine MDK Rabbit Monoclonal Antibody

Catalog Number: M01823

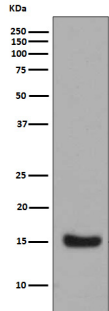
### Overview

Product Name	Anti-Midkine MDK Rabbit Monoclonal Antibody
Reactive Species	Human
Description	Boster Bio Anti-Midkine MDK Rabbit Monoclonal Antibody catalog # M01823. Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human.
Application	IP, IF, IHC, ICC, WB
Clonality	Monoclonal EBI-13
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P21741

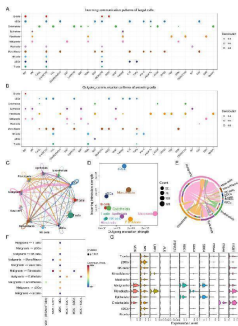
### Technical Details

Immunogen	A synthesized peptide derived from human Midkine
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:500-2000 IHC 1:50-200 ICC/IF 1:50-200 IP 1:30

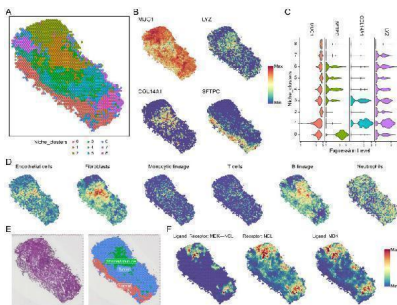
## Anti-Midkine MDK Rabbit Monoclonal Antibody (M01823) Images



Western blot analysis of Midkine expression in Midkine Recombinant protein.

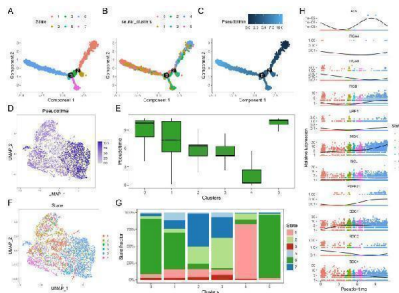


Single-cell communication networks. (A) Incoming communication patterns of target cells, showing pathways to which each cell type responds. (B) Outgoing communication patterns of secreting cells, illustrating the pathways through which cells send signals, MIF, MK and CXCL pathway exhibit high activity. (C) Network diagram showing the strength of intercellular communication, with connections between various cell types. (D) Scatter plot comparing outgoing and incoming communication strengths across cell populations, with bubble size indicating the number of interactions, malignant cells have higher strength of intercellular communication. (E) Chord diagram depicting communication via the MK pathway between different cell types. (F) Ligand-receptor interaction probabilities within the MK pathway between malignant and other cell types. Dot size represents significance (P-value), and color represents communication probability highlighting the MDK-NCL signaling pathway. (G) Violin plots of MK pathway gene expression levels across cell types, showing gene activity variations, MDK has advanced expression level in malignant cells. Index in PubMed under a CC BY license. PMID: 40396179

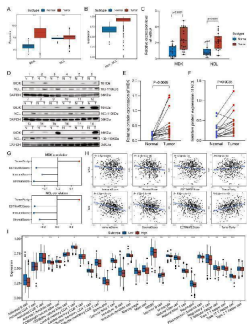


Spatial transcriptomics and MDK-NCL signal communication. (A) Niche clustering in spatial transcriptomics samples, identifying distinct ecological zones. (B) Spatial expression of representative markers in key regions: MUC1 (tumor region), LYZ (immune region), COL14A1 (stromal region), and SFTPC (normal region). (C) Violin plots displaying the expression of MUC1, LYZ, COL14A1, and SFTPC across different niches. (D) MCPcounter analysis showing the infiltration of six cell types (e.g., endothelial cells, fibroblasts, immune lineages) across spatial regions. (E) Spatial niche classification, distinguishing tumor, immune-stromal, and normal regions. (F) MDK-NCL ligand-receptor interaction analysis, spatially mapping MDK ligands, NCL receptors, and their binding regions. Index in PubMed under a CC BY license. PMID: 40396179

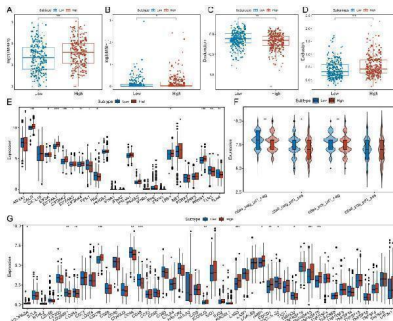
Single-cell pseudotime analysis. (A) Pseudotime trajectory analysis showing the 6 differentiation states of cells. (B) Subtype classification of malignant cells along the



pseudotime trajectory. (C) Pseudotime scores mapped along the differentiation trajectory. (D) UMAP plot visualizing pseudotime scores across individual cells. (E) Box plots comparing pseudotime scores across different malignant cell clusters, cluster 0, 1, and 5 had higher pseudotime scores. (F) UMAP plot of differentiation states, with colors representing distinct states. (G) Stacked bar plots showing the proportion of differentiation states within each malignant cell cluster, cluster 0, 1, and 5 have larger proportion of state 6. (H) Expression dynamics of MK pathway genes (e.g., MDK, NCL, ITG genes) along the pseudotime trajectory, highlighting gene expression changes during differentiation, MDK and NCL express more in the later time. Index in PubMed under a CC BY license. PMID: 40396179

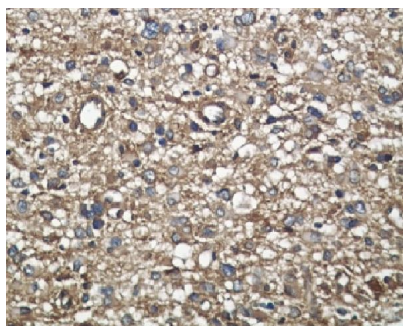


Association of MDK-NCL with the immune microenvironment. (A) Boxplot shows the expression levels of MDK and NCL genes in tumor and control groups, it exhibit higher activity in tumor group. (B) MDK-NCL enrichment scores in tumor and control groups. (C) Relative mRNA expression levels of MDK and NCL in tumor and control groups from in-house data. (D) Relative protein expression levels of MDK and NCL in tumor and control groups from in-house data. (E) Comparison of MDK protein expression levels between tumor and control groups. (F) Comparison of NCL protein expression levels between tumor and control groups. (G) Correlation of MDK and NCL expression with ImmuneScore, StromalScore, ESTIMATEScore, and TumorPurity. (H) Scatter plots depicting the relationship between MDK and NCL expression and immune-related scores (ImmuneScore, StromalScore, ESTIMATEScore) as well as TumorPurity. (I) Comparison of immune cell infiltration scores across high and low MDK-NCL expression groups for 28 immune cell types. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001. Index in PubMed under a CC BY license. PMID: 40396179



Association of MDK-NCL with immunotherapy response. (A) Comparison of tumor mutation burden (TMB) between high and low MDK-NCL expression groups. (B) Comparison of microsatellite instability (MSI) between high and low MDK-NCL groups. (C) Comparison of dysfunction scores between high and low MDK-NCL groups. (D) Comparison of exclusion scores between high and low MDK-NCL groups. (E) Expression of immunogenic cell death (ICD)-related genes in high and low MDK-NCL groups. (F) Expression levels of CTLA4 and PD1 in high and low MDK-NCL groups. (G) Comparison of immune checkpoint gene expression between high and low MDK-NCL expression groups. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001. Index in PubMed under a CC BY license. PMID: 40396179

Immunohistochemical analysis of paraffin-embedded human liver carcinoma, using Midkine Antibody .



## 1 Publications Citing This Product

1. PubMed ID: 18350623, Over-expressed and truncated midkines promote proliferation of BGC823 cells in vitro and tumor growth in vivo

Visit [bosterbio.com/anti-midkine-rabbit-monoclonal-antibody-m01823-boster.html](https://bosterbio.com/anti-midkine-rabbit-monoclonal-antibody-m01823-boster.html) to see all 1 publications.

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