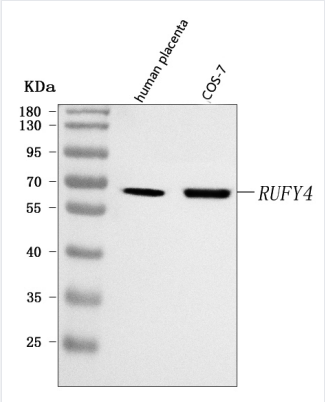
RUFY4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

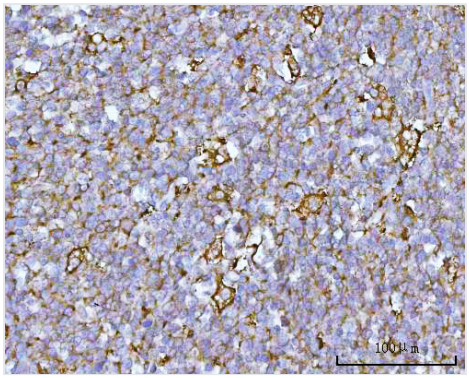
Product Name	RUFY4, Polyclonal Antibody
Full Product Name	Anti-RUFY4 Antibody Picoband
Product Gene Name	anti-RUFY4 antibody
Product Synonym Names	Transmembrane protein 240; kelch repeat and BTB domain containing 2; Kelch repeat and BTB domain-containing protein 2; BTB and kelch domain-containing protein 1; KBTBD2; BKLHD1; KIAA1489
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Monkey
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Detected in liver, skeletal muscle, kidney, pancreas, spleen, thyroid, testis, ovary, small intestine and colon.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	64,350 Da
3D Structure	ModBase 3D Structure for Q6ZNE9
Immunogen	E coli-derived human RUFY4 recombinant protein (Position: M1-K553).
Subcellular Localization	Cul3-RING ubiquitin ligase complex
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Required for DNA double-strand breaks (DSBs) formation in unsynapsed regions during meiotic recombination. Probably acts by forming a complex with MEI4 and REC114, which activates DSBs formation in unsynapsed regions, an essential step to ensure completion of synapsis. Not required for HORMAD1 functions in pairing-independent synaptonemal complex formation, ATR recruitment to unsynapsed axes, meiotic silencing of unsynapsed chromatin (MSUC) or meiotic surveillance.
Product Categories/Family for anti-RUFY4 antibody	Primary Antibodies; Cell Biology
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-RUFY4 antibody	Western Blot (WB), Immunohistochemistry (IHC), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-RUFY4 antibody	WB: 0.25-0.5ug/ml, Human, Monkey IHC(Paraffin-embedded Section): 2-5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-RUFY4 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.

Product References and Citations for anti-RUFY4 antibody	1. Terawaki, S. , Camosseto, V. , Prete, F. , Wenger, T. , Papadopoulos, A. , & Rondeau, C. , et al. (2015). Run and fyve domain-containing protein 4 enhances autophagy and lysosome tethering in response to interleukin-4. The Journal of Cell Biology, 210(7), 1133-1152.2. Chen, S. , Robert, F. , Lambertus, K. , Yuan, L. , Wang, J. , & Kathryn, R. , et al. (2018). An interactome perturbation framework prioritizes damaging missense mutations for developmental disorders. Nature Genetics.3. Haenig, C. , Atias, N. , Taylor, A. K. , Mazza, A. , & Wanker, E. E. . (2020). Interactome mapping provides a network of neurodegenerative disease proteins and uncovers widespread protein aggregation in affected brains. Cell Reports, 32(7), 108050.
Other Notes	Small volumes of anti-RUFY4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for RUFY4 purchase	MBS1759488 is an antibody targeting RUFY4. Also known as Anti-RUFY4 Antibody Picoband. Reactive in Human, Monkey. Host: Rabbit.



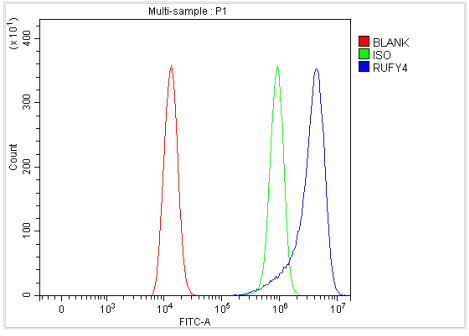
Western Blot (WB) of anti-RUFY4 antibody

Figure 1. Western blot analysis of RUFY4 using anti-RUFY4 antibody (MBS1759488).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human placenta tissue lysates,Lane 2: monkey COS-7 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-RUFY4 antigen affinity purified polyclonal antibody (#MBS1759488) at 0.5ug/mL overnight at 4 degree C, 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 is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for RUFY4 at approximately 64 kDa. The expected band size for RUFY4 is at 64 kDa.



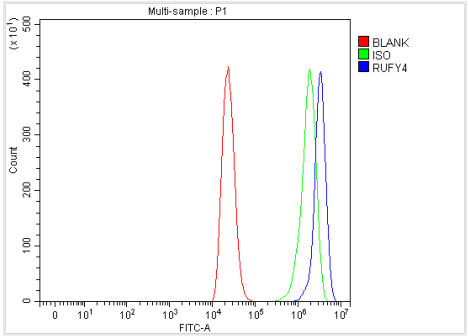
Immunohistochemistry (IHC) of anti-RUFY4 antibody

Figure 2. IHC analysis of RUFY4 using anti-RUFY4 antibody (MBS1759488).RUFY4 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-RUFY4 Antibody (MBS1759488) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



Flow Cytometry (FC/FACS) of anti-RUFY4 antibody

Figure 3. Flow Cytometry analysis of HEL cells using anti-RUFY4 antibody (MBS1759488).Overlay histogram showing HEL cells stained with MBS1759488 (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-RUFY4 Antibody (MBS1759488, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Flow Cytometry (FC/FACS) of anti-RUFY4 antibody

Figure 4. Flow Cytometry analysis of THP-1 cells using anti-RUFY4 antibody (MBS1759488).Overlay histogram showing THP-1 cells stained with MBS1759488 (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-RUFY4 Antibody (MBS1759488, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RUFY4. It may not necessarily be applicable to this product.

NCBI GI #	282165733
NCBI GeneID	285180
NCBI Accession #	NP_940885.2
UniProt Primary Accession #	Q6ZNE9
UniProt Secondary Accession #	Q6ZR96
UniProt Related Accession #	Q6ZNE9
GenBank Nucleotide #	NM_198483.3
NCBI Official Full Name	RUN and FYVE domain-containing protein 4
NCBI Official Synonym Full Names	RUN and FYVE domain containing 4
NCBI Official Symbol	RUFY4
UniProt Protein Name	RUN and FYVE domain-containing protein 4
Protein Family	RUN and FYVE domain-containing protein
UniProt Gene Name	RUFY4
UniProt Entry Name	RUFY4_HUMAN
NCBI Protein Information	RUN and FYVE domain-containing protein 4
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