

8430410A17Rik antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI14107

Specification

8430410A17Rik antibody - N-terminal region - Product Information

Application	WB
Primary Accession	Q8R1M0
Other Accession	NM_173737 , NP_776098
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Dog
Predicted	Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39kDa KDa

8430410A17Rik antibody - N-terminal region - Additional Information

Gene ID 232210

Alias Symbol C85376

Other Names

Embryonic stem cell-specific 5-hydroxymethylcytosine-binding protein, ES cell-specific 5hmC-binding protein, Putative peptidase SRAPD1, 3.4.-., SRAP domain-containing protein 1, Hmces, Srapd1

Format

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage

Add 50 ul of distilled water. Final anti-8430410A17Rik antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions

8430410A17Rik antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

8430410A17Rik antibody - N-terminal region - Protein Information

Name Hmces {ECO:0000303|PubMed:31806351, ECO:0000312|MGI:MGI:1914053}

Function

Sensor of abasic sites in single-stranded DNA (ssDNA) required to preserve genome integrity by promoting error-free repair of abasic sites (By similarity). Acts as an enzyme that recognizes and binds abasic sites in ssDNA at replication forks and chemically modifies the lesion by forming a covalent cross-link with DNA: forms a stable thiazolidine linkage between a ring-opened abasic site

and the alpha-amino and sulfhydryl substituents of its N-terminal catalytic cysteine residue (By similarity). Promotes error-free repair by protecting abasic sites from translesion synthesis (TLS) polymerases and endonucleases that are error-prone and would generate mutations and double-strand breaks (By similarity). The HMCES DNA-protein cross-link is then either reversed or degraded (By similarity). HMCES is able to catalyze the reversal of its thiazolidine cross-link and cycle between a cross-link and a non-cross-linked state depending on DNA context: mediates self-reversal of the thiazolidine cross-link in double stranded DNA, allowing APEX1 to initiate downstream repair of abasic sites (By similarity). The HMCES DNA-protein cross-link can also be degraded by the SPRTN metalloprotease following unfolding by the BRIP1/FANCI helicase (By similarity). Has preference for ssDNA, but can also accommodate double-stranded DNA with 3' or 5' overhang (dsDNA), and dsDNA-ssDNA 3' junction (By similarity). Plays a protective role during somatic hypermutation of immunoglobulin genes in B-cells: acts via its ability to form covalent cross-links with abasic sites, thereby limiting the accumulation of deletions in somatic hypermutation target regions (PubMed:35450882). Also involved in class switch recombination (CSR) in B-cells independently of the formation of a DNA-protein cross-link: acts by binding and protecting ssDNA overhangs to promote DNA double-strand break repair through the microhomology-mediated alternative-end-joining (Alt-EJ) pathway (PubMed:31806351). Acts as a protease: mediates autocatalytic processing of its N-terminal methionine in order to expose the catalytic cysteine (PubMed:29020633).

Cellular Location

Chromosome {ECO:0000250|UniProtKB:Q96FZ2}. Note=Recruited to chromatin following DNA damage. Localizes to replication forks. {ECO:0000250|UniProtKB:Q96FZ2}

Tissue Location

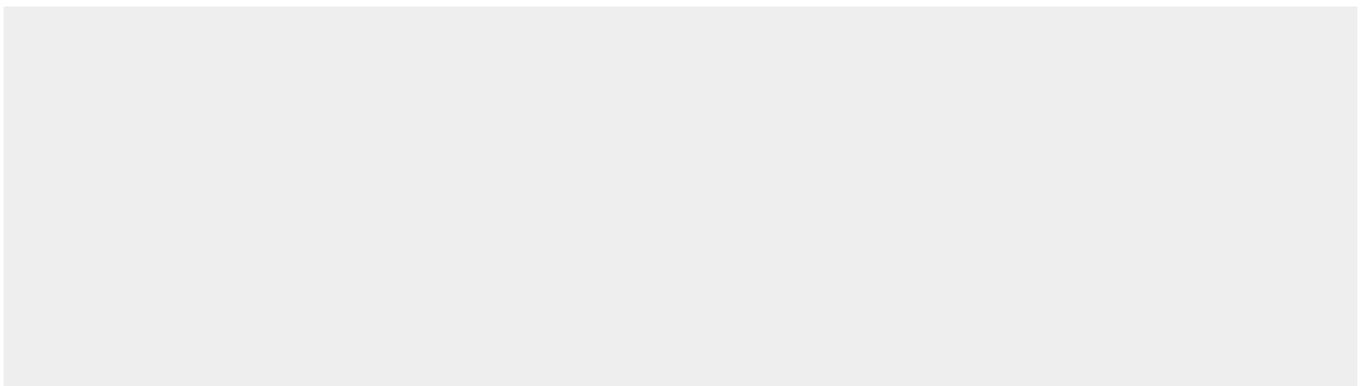
Expressed in embryonic stem cells.

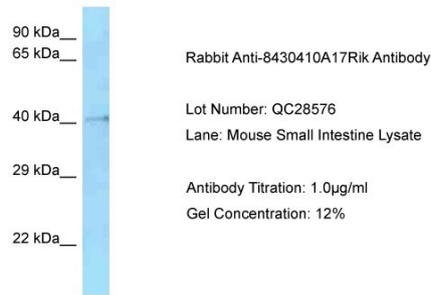
8430410A17Rik antibody - N-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

8430410A17Rik antibody - N-terminal region - Images





Host: Rabbit
Target Name: 8430410A17Rik
Sample Tissue: Mouse Small Intestine
Antibody Dilution: 1.0µg/ml

8430410A17Rik antibody - N-terminal region - References

Spruijt C.G., et al. Cell 152:1146-1159(2013).