

## Product Information

# Anti-FAM134B antibody produced in rabbit

Affinity isolated antibody

**SAB4200847**

## Product Description

Anti-FAM134B antibody is developed in rabbit using synthetic peptide corresponding to the internal region of human FAM134B (GeneID: 54463), conjugated to KLH as immunogen. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-FAM134B antibody specifically recognizes an epitope on human FAM134B cytoplasmic domain. The antibody may be used in various immunochemical techniques including Immunoblotting (may appear as two isoforms ~ 55 kDa and ~ 40 kDa) and Immunofluorescence. Detection of the FAM134B band by Immunoblotting is specifically inhibited by the immunogen.

Five endoplasmic reticulum (ER)-resident proteins have been shown to function as receptors for selective ER-phagy: FAM134B, SEC62, RTN3, CCPG1 and ATL3.<sup>1-2</sup> These integral membrane proteins appear to partition into different sub-domains of the ER. All of them harbor a sequential peptide motif within the cytoplasmic region, enabling binding to LC3/GABARAP proteins associated with phagophore membrane.<sup>1</sup>

FAM134B (also known as RETREG1 or JK-1) is the first ER-phagy receptor to be identified.<sup>2</sup> The protein was discovered to be involved in the pathogenesis of esophageal squamous cell carcinoma (ESCC).<sup>3-4</sup> Loss of function mutations in FAM134B result in severe sensory and autonomic neuropathy (HSANII).<sup>5</sup> In addition, FAM134B has been classified as an intra-membrane ER-resident protein that is characterized by the presence of a reticulon homology domain (RHD) and that is mainly located at the edges of the ER sheets.<sup>1,6</sup> In research, FAM134B is implicated in the suppression of viral replication during Ebola, Dengue, Zika and West Nile viral infections.<sup>7-8</sup> Non-structural viral proteases such as NS2S3 specifically cleave FAM134B, thereby subverting ER-phagy.<sup>7</sup> Specific mutations in FAM134B and expression profiles are strongly correlated with colorectal cancers.<sup>9</sup> Increased expression of FAM134B is also implicated with susceptibility to vascular dementia and allergic rhinitis.<sup>9-10</sup>

## Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

## Precautions and Disclaimer

This product is for research use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

## Product Profile

**Immunoblotting:** a working dilution of 1:500-1:1000 is recommended using whole extract of HEK-293 cells over-expressing human FAM134B.

**Immunofluorescence:** a working dilution of 1:500-1:1000 is recommended using human HeLa cells.

**Note:** In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

## References

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8. Chiramel AI., et al., *J Infect Dis.*, **214**, S319-25 (2016).
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