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Product Information

Anti-FRAT1 (C-terminal)
produced in rabbit, affinity isolated antibody

Product Number **SAB4200049**

Product Description

Anti-FRAT1 (C-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the C-terminal of human FRAT1 (GeneID: 10023), conjugated to KLH. The corresponding sequence is highly conserved (87% identity) in rat FRAT1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-FRAT1 (C-terminal) specifically recognizes human and rat FRAT1. The antibody may be used in various immunochemical techniques including immunoblotting (~29 kDa). Detection of the FRAT1 band by immunoblotting is specifically inhibited by the FRAT1 immunizing peptide.

The Wnt signaling pathways play an essential role in the regulation of cellular proliferation, differentiation, motility, morphogenesis, and has been linked to some forms of cancer.[1,2] Upon activation of the Wnt/β-catenin signaling pathway, dissociation of axin/GSK3 and axin interaction with the Wnt-Fz-LRP6 complex, prevents the phosphorylation of β-catenin, resulting in upregulation of β-catenin and activation of TCF/LEF-1-dependent transcription.

FRAT1 (Frequently rearranged in advanced T-cell lymphomas-1) is a GSK3β-binding protein that plays a pivotal role in the Wnt signaling pathway.[1,2] FRAT1 contains a conserved GSK3β interacting domain. It competes with axin for binding of GSK3β, thus displacing GSK3β from the axin-β-catenin complex. Two *FRAT* genes have been identified in humans, *FRAT1* and *FRAT2*, whereas in mouse three isoforms, also FRAT1-3, have been identified.[3-6] Although, both human FRAT1 and FRAT2 are ubiquitously expressed, tissue expression indicates that FRAT2 is expressed at higher levels in brain than FRAT1, suggesting that it may play a more prominent role in regulating neuronal GSK3β signaling.[4,6] In contrast FRAT1 has been shown to be more efficient than FRAT2 in the canonical Wnt signaling pathway. FRAT1 expression is upregulated in several human cancer lines primarily in gastric cancer, and has been shown to be overexpressed in esophageal squamous cell carcinoma (ESCC).[3,7]

Reagent

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

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D 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, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1.5-3 μg/mL is recommended using a HEK-293T cell extract overexpressing human FRAT1 and a rat skeletal muscle extract (S1 fraction).

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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