

FADS1 Rabbit mAb

Catalog # AP76494

Product Information

Application	WB, IHC-P, IHC-F, ICC
Primary Accession	O60427
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	51964

Additional Information

Gene ID	3992
Other Names	FADS1
Dilution	WB~~1/500-1/1000 IHC-P~~N/A IHC-F~~N/A ICC~~N/A
Format	Liquid

Protein Information

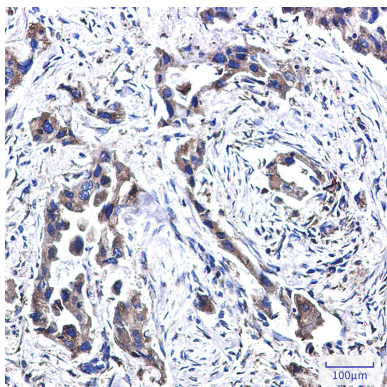
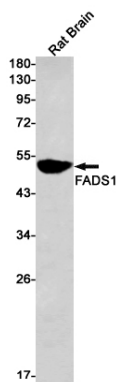
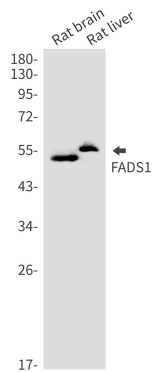
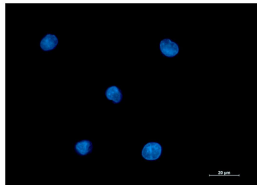
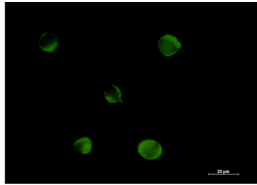
Name	FADS1 {ECO:0000303 PubMed:10860662, ECO:0000312 HGNC:HGNC:3574}
Function	<p>[Isoform 1]: Acts as a front-end fatty acyl-coenzyme A (CoA) desaturase that introduces a cis double bond at carbon 5 located between a preexisting double bond and the carboxyl end of the fatty acyl chain. Involved in biosynthesis of highly unsaturated fatty acids (HUFA) from the essential polyunsaturated fatty acids (PUFA) linoleic acid (LA) (18:2n-6) and alpha-linolenic acid (ALA) (18:3n-3) precursors. Specifically, desaturates dihomo-gamma-linoleoate (DGLA) (20:3n-6) and eicosatetraenoate (ETA) (20:4n-3) to generate arachidonate (AA) (20:4n-6) and eicosapentaenoate (EPA) (20:5n-3), respectively (PubMed:10601301, PubMed:10769175). As a rate limiting enzyme for DGLA (20:3n-6) and AA (20:4n-6)-derived eicosanoid biosynthesis, controls the metabolism of inflammatory lipids like prostaglandin E2, critical for efficient acute inflammatory response and maintenance of epithelium homeostasis. Contributes to membrane phospholipid biosynthesis by providing AA (20:4n-6) as a major acyl chain esterified into phospholipids. In particular, regulates phosphatidylinositol-4,5-bisphosphate levels, modulating inflammatory cytokine production in T-cells (By similarity). Also desaturates (11E)-octadecenoate (trans-vaccenoate)(18:1n-9), a metabolite in the biohydrogenation pathway of LA (18:2n-6) (By similarity).</p>
Cellular Location	<p>[Isoform 1]: Endoplasmic reticulum membrane {ECO:0000250 UniProtKB:A4UVI1}; Multi-pass membrane protein</p>

{ECO:0000250|UniProtKB:A4UVI1}. Mitochondrion

Tissue Location

Widely expressed, with highest levels in liver, brain, adrenal gland and heart.
Highly expressed in fetal liver and brain.

Images



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