

Rabbit Anti-4-hydroxynonenal (4-HNE) Polyclonal: RC0149, RC0149RTU7

Intended Use: For Research Use Only

Description: 4-hydroxy-2-nonenal (4-hydroxynonenal, 4-HNE) is a highly reactive aldehyde generated by the exposure of polyunsaturated fatty acids to peroxides and reactive oxygen species (ROS). It non-enzymatically forms stable protein adducts with histidine, lysine, and cysteine side chains that have been used as biomarkers for oxidative damage in cells. Conditions where 4-HNE immunoreactivity has been observed include inflammation, neurodegenerative diseases, and ischemic damage to the heart and brain. Aldehydic products of lipid peroxidation, such as 4 hydroxynonenal (4 HNE), have been implicated in the etiology of pathological changes under oxidative stress as a key mediator of oxidative stress induced cell death. It is a stable product of lipid peroxidation, is proarrhythmic and may contribute to the cytotoxic effects of oxidative stress 4-HNE has been hypothesized to play a key role in cell signal transduction, in a variety of pathways from cell cycle events to cellular adhesion.

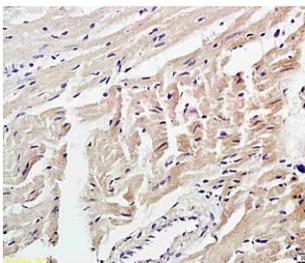
Specifications

Clone: Polyclonal
 Source: Rabbit
 Isotype: IgG
 Reactivity: Human, mouse, rat, monkey
 Immunogen: 4 Hydroxynonenal conjugated to BSA
 Localization: Cytoplasm
 Formulation: Protein A purified antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
 Storage: Store at 2°- 8°C
 Applications: IHC, ELISA, IF, WB
 Package:

Description	Catalog No.	Size
4-hydroxynonenal (4-HNE) Polyclonal Concentrated	RC0149	1 ml
4-hydroxynonenal (4-HNE) Polyclonal Prediluted	RC0149RTU7	7 ml

IHC Procedure*

Positive Control Tissue: Pancreas, colorectal carcinoma cells
 Concentrated Dilution: 10-50
 Pretreatment: Tris EDTA pH9.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
 Incubation Time and Temp: Overnight @ 4°C
 Detection: Refer to the detection system manual
 * Result should be confirmed by an established diagnostic procedure.



FFPE mouse pancreas stained with anti-4-HNE using DAB

References:

1. promotes motor neuron survival and extends the lifespan of amyotrophic lateral sclerosis mice. LanCL, et al. Cell Death Differ 27:1369-1382, 2020.
2. Outcomes of Gallic Acid on Alternariol Induced Cyto-Morphic and Genotoxic In Vivo Changes in Parotid Gland: 4-HNE Incorporated. Samak MA, et al. Biomedicines 7:N/A, 2019.
3. Pediatric Crohn disease patients exhibit specific ileal transcriptome and microbiome signature. Yael Haberman, et al. J Clin Invest. Aug 1; 124(8): 3617–3633, 2014.

Doc. 100-RC0149
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