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# LCT Rabbit pAb

LCT Rabbit pAb
Catalog # AP56987

## Product Information

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| **Application** | WB |
| **Primary Accession** | P09848 |
| **Reactivity** | Mouse |
| **Predicted** | Rat, Pig, Dog, Human, Rabbit, Horse, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 218587 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human LCT |
| **Epitope Specificity** | 1121-1220/1927 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Apical cell membrane. Brush border. |
| **DISEASE** | Defects in LCT are the cause of congenital lactase deficiency (COLACD) [MIM:223000]; also known as hereditary alactasia or disaccharide intolerance II. Congenital lactase deficiency is a an autosomal recessive, rare and severe gastrointestinal disorder. It is characterized by watery diarrhea in infants fed with breast milk or other lactose-containing formulas. An almost total lack of LCT activity is found in jejunal biopsy material of patients with congenital lactase deficiency. Opposite to congenital lactase deficiency, adult-type hypolactasia, also known as lactose intolerance, is the most common enzyme deficiency worldwide. It is caused by developmental down-regulation of lactase activity during childhood or early adulthood. The decline of lactase activity is a normal physiological phenomenon; however, the majority of Northern Europeans have the ability to maintain lactase activity and digest lactose throughout life (lactase persistence). The down-regulation of lactase activity operates at the transcriptional level and it is associated with a noncoding variation in the MCM6 gene, located in the upstream vicinity of LCT. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | The protein encoded by this gene belongs to the family 1 of glycosyl hydrolases. The protein is integral to plasma membrane and has both phlorizin hydrolase activity and lactase activity. [provided by RefSeq, Jul 2008] |

## Additional Information

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| **Gene ID** | 3938 |
| **Other Names** | Lactase/phlorizin hydrolase, Lactase/glycosylceramidase, Lactase, 3.2.1.108, |

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| | Glycosylceramidase, Phlorizin hydrolase, LCT (HGNC:6530) |
| **Dilution** | WB=1:500-2000 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | LCT ( HGNC:6530) |
| **Function** | Broad specificity glycosidase of the intestinal brush border membrane that hydrolyzes lactose, the main sugar in mammalian milk, to produce D-glucose and D-galactose (PubMed:12594539, PubMed:16400612, PubMed:3929764, PubMed:9762914). The mature protein is composed of two domains that catalyze the hydrolysis of beta-glucopyranosides and beta-galactopyranosides, with a preference for hydrophilic aglycones (in lactose and cellobiose) for one domain and hydrophobic aglycones (in phlorizin and glycosylceramides) for the other (PubMed:12594539, PubMed:3929764, PubMed:9762914). |
| **Cellular Location** | Apical cell membrane; Single-pass type I membrane protein. Note=Brush border {ECO:0000250\|UniProtKB:P09849} |
| **Tissue Location** | Specifically expressed in small intestine. |

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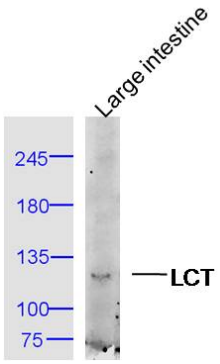
## Images




Sample:Large intestine (Mouse) Lysate at 40 ug
Primary: Anti-LCT (AP56987) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 121 kD
Observed band size: 121 kD