

# PRODUCT INFORMATION



## Layilin Isoform 2 Extracellular Domain (human, recombinant)

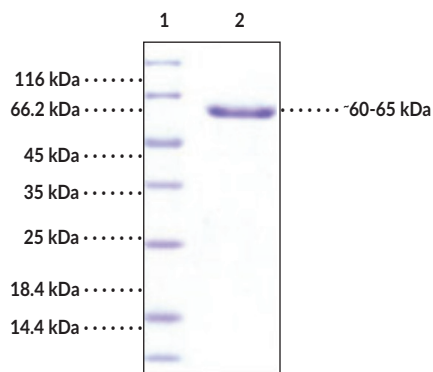
Item No. 37021

### Overview and Properties

<b>Synonym:</b>	LAYN
<b>Source:</b>	Active recombinant human C-terminal His-tagged coagulation factor IX expressed in HEK293 cells
<b>Amino Acids:</b>	22-220
<b>Uniprot No.:</b>	Q6UX15
<b>Molecular Weight:</b>	49.5 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Purity:</b>	≥90% estimated by SDS-PAGE
<b>Supplied in:</b>	Lyophilized from sterile 50 mM Tris, pH 7.5, with 100 mM glycine and 10 mM sodium chloride
<b>Endotoxin Testing:</b>	<1.0 EU/μg, determined by the LAL endotoxin assay
<b>Bioactivity:</b>	See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers

Lane 2: Layilin Isoform 2 Extracellular Domain

#### SDS-PAGE Analysis of Layilin Isoform 2 Extracellular Domain.

This protein has a calculated molecular weight of 49.5 kDa. It has an apparent molecular weight of approximately 60-65 kDa by SDS-PAGE under reducing conditions due to glycosylation.

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
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## Description

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Layilin is a C-type lectin receptor.<sup>1</sup> It is composed of an extracellular region that contains the C-type lectin homology domain, a transmembrane domain, and a cytoplasmic domain. Layilin is ubiquitously expressed and localizes to the cell surface, but has also been found in mitochondria.<sup>1,2</sup> It is involved in cell migration, the epithelial-to-mesenchymal transition (EMT), and antitumor immunity and binds to the extracellular matrix proteins hyaluronan and glycosylated collagen, as well as the cytoskeleton-membrane linker proteins talin, merlin, and radixin.<sup>1,3-5</sup> The layilin isoform 2 extracellular domain binds to melanoma cells in a calcium-dependent manner.<sup>5</sup> Knockout of *LAYN* prevents the accumulation of lymph node-derived CD8<sup>+</sup> tumor-infiltrating lymphocytes (TILs) in a competitive adoptive transfer murine colon adenocarcinoma model.<sup>6</sup> Layilin protein levels are increased in CD8<sup>+</sup> TILs that highly express programmed cell death protein 1 (PD-1) and cytotoxic T lymphocyte protein 4 (CTLA-4) isolated from patients with metastatic melanoma. Cayman's Layilin Isoform 2 Extracellular Domain (human, recombinant) protein consists of 437 amino acids, has a calculated molecular weight of 49.5 kDa, and a predicted N-terminus of Ala22 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 60-65 kDa due to glycosylation.

## References

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3. Adachi, T., Arito, M., Suematsu, N., *et al.* Roles of layilin in TNF- $\alpha$ -induced epithelial-mesenchymal transformation of renal tubular epithelial cells. *Biochem. Biophys. Res. Commun.* **467**(1), 63-69 (2015).
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5. Glasgow, J.E., Byrnes, J.R., Barbee, S.D., *et al.* Identifying and antagonizing the interactions between layilin and glycosylated collagens. *Cell Chem. Biol.* **29**(4), 597-604 (2022).
6. Mahuron, K.M., Moreau, J.M., Glasgow, J.E., *et al.* Layilin augments integrin activation to promote antitumor immunity. *J. Exp. Med.* **217**(9), e20192080 (2020).