

PRODUCT INFORMATION



DDR1b Extracellular Domain (human, recombinant)

Item No. 44194

Overview and Properties

Synonyms: CD167, CD167 Antigen-like Family Membe, DDR1 Isoform b, Discoidin Domain-containing Receptor 1b, Discoidin Domain-containing Receptor Tyrosine Kinase 1b, Discoidin Domain Receptor 1b

Source: Recombinant human C-terminal His-tagged DDR1b expressed in HEK293 cells

Amino Acids: 19-416

Uniprot No.: Q08345

Molecular Weight: 45.7 kDa

Storage: -80°C (as supplied)

Stability: ≥1 year

Purity: ≥97% estimated by SDS-PAGE

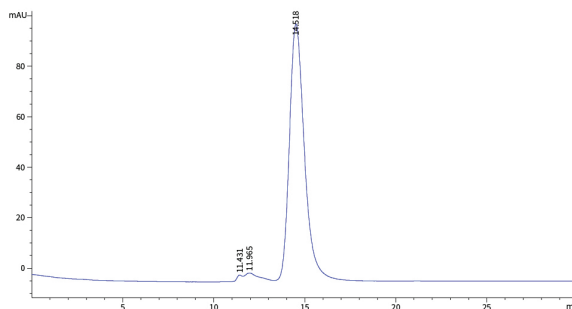
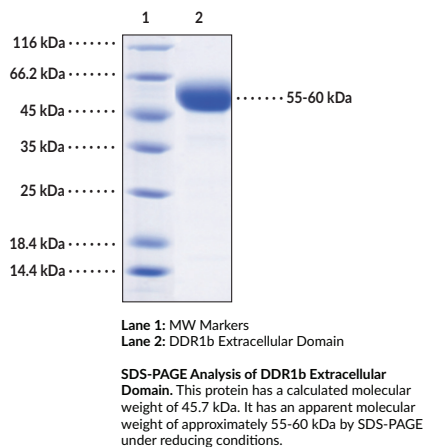
Supplied in: Lyophilized from sterile PBS, pH 7.4

Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay

Protein Concentration: *batch specific*

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

Images



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
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Discoidin domain-containing receptor 1 (DDR1), also known as CD167, is a receptor tyrosine kinase (RTK) with roles in cell migration, proliferation, and differentiation and other physiological and pathological processes regulated by collagen remodeling.^{1,3} It is composed of an extracellular discoidin domain, a transmembrane domain, and intracellular juxtamembrane and kinase domains.³ DDR1 is selectively expressed in epithelial cells and localizes to the cell membrane.² DDR1 undergoes alternative splicing to produce five isoforms, of which three, DDR1a, DDR1b, and DDR1c, are kinase active and two, DDR1d and DDR1e, are kinase domain-deficient. Unlike most RTKs that bind soluble ligands, DDR1 binds to and is activated by fibrillar and non-fibrillar collagens. DDR1b binds directly to talin and enhances integrin β 1-mediated cell migration.¹ Cayman's DDR1b Extracellular Domain (human, recombinant) protein consists of 409 amino acids, has a calculated molecular weight of 45.7 kDa, and a predicted N-terminus of Asp19 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 55-60 kDa due to glycosylation.

References

1. Borza, C.M., Bolas, G., Zhang, X., *et al.* The collagen receptor discoidin domain receptor 1b enhances integrin β 1-mediated cell migration by interacting with talin and promoting Rac1 activation. *Front. Cell Dev. Biol.* **10**, 836797 (2022).
2. Tian, Y., Bai, F., and Zhang, D. New target DDR1: A "double-edged sword" in solid tumors. *Biochim. Biophys. Acta Rev. Cancer* **1878(1)**, 188829 (2023).
3. Song, S., Shackel, N.A., Wang, X.M., *et al.* Discoidin domain receptor 1: Isoform expression and potential functions in cirrhotic human liver. *Am. J. Pathol.* **178(3)**, 1134-1144 (2011).

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