

# PRODUCT INFORMATION



## DDR2 (human, recombinant)

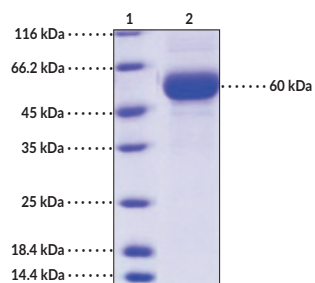
Item No. 44182

### Overview and Properties

<b>Synonyms:</b>	CD167 Antigen-like Family Member B, CD167b, Discoidin Domain-containing Receptor 2, Discoidin Domain-containing Receptor Tyrosine Kinase 2, Discoidin Domain Receptor 2, Neurotrophic Tyrosine Kinase Receptor-related 3, NTRKR3
<b>Source:</b>	Recombinant human C-terminal His-tagged DDR2 expressed in HEK293 cells
<b>Amino Acids:</b>	22-399
<b>Uniprot No.:</b>	Q16832
<b>Molecular Weight:</b>	44.1 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Purity:</b>	≥95% estimated by SDS-PAGE
<b>Supplied in:</b>	Lyophilized from sterile PBS, pH 7.4
<b>Endotoxin Testing:</b>	<1.0 EU/μg, determined by the LAL endotoxin assay
<b>Bioactivity:</b>	See figures for details

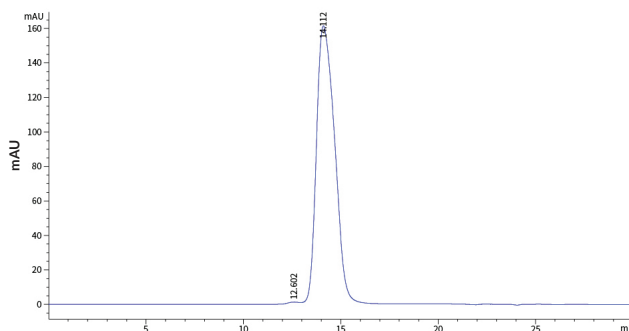
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Images



Lane 1: MW Markers  
Lane 2: DDR2

**SDS-PAGE Analysis of DDR2.** This protein has a calculated molecular weight of 44.1 kDa. It has an apparent molecular weight of approximately 60 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**  
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

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Discoidin domain-containing receptor 2 (DDR2), also known as CD167b, is a receptor tyrosine kinase (RTK) with roles in microenvironmental sensing and the physiological and pathological processes regulated by collagen remodeling.<sup>1-3</sup> It is composed of an extracellular discoidin domain, discoidin-like domain, and juxtamembrane domain, a transmembrane domain, and an intracellular juxtamembrane domain and kinase domain.<sup>2,3</sup> DDR2 is expressed in mesenchymal cells, including fibroblasts, myofibroblasts, smooth muscle cells, and chondrocytes, as well as in circulating human neutrophils, and localizes to the cell membrane. Unlike most RTKs that bind soluble ligands, DDR binds to collagen monomers, including type I, II, III, and V fibrillar collagen and non-fibrillar type X collagen.<sup>1</sup> Collagen binding induces autophosphorylation of the intracellular juxtamembrane and kinase domains and recruitment of various proteins to facilitate signal transduction. DDR2 is associated with cartilage and bone damage in patients with rheumatoid arthritis.<sup>2</sup> DDR2 is overexpressed in various cancers, including non-small cell lung cancer (NSCLC), Hodgkin lymphoma, prostate cancer, thyroid carcinoma, and nasopharyngeal carcinomas. Cayman's DDR2 (human, recombinant) protein consists of 389 amino acids, has a calculated molecular weight of 44.1 kDa, and a predicted N-terminus of Lys22 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is ~60 kDa due to glycosylation.

## References

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1. Trono, P., Ottavi, F., and Rosano, L. Novel insights into the role of Discoidin domain receptor 2 (DDR2) in cancer progression: A new avenue of therapeutic intervention. *Matrix Biol.* **125**, 31-39 (2024).
2. Mariadoss, A.V.A. and Wang, C.-Z. Exploring the cellular and molecular mechanism of discoidin domain receptors (DDR1 and DDR2) in bone formation, regeneration, and its associated disease conditions. *Int. J. Mol. Sci.* **24(19)**, 14895 (2023).
3. Elkamhawy, A., Lu, Q., Nada, H., *et al.* The journey of DDR1 and DDR2 kinase inhibitors as rising stars in the fight against cancer. *Int. J. Mol. Sci.* **22(12)**, 6535 (2021).

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