# PRODUCT INFORMATION

## Axl Extracellular Domain (human, recombinant)

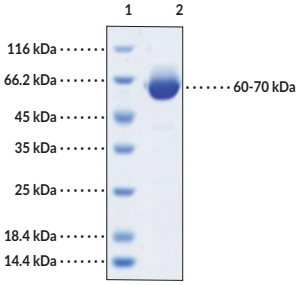
*Item No. 44185*

### Overview and Properties

| | |
|---|---|
| **Synonym:** | UFO |
| **Source:** | Active recombinant human C-terminal His-tagged Axl extracellular domain expressed in HEK293 cells |
| **Amino Acids:** | 33-449 |
| **Uniprot No.:** | P30530 |
| **Molecular Weight:** | 46.5 kDa |
| **Storage:** | -80°C (as supplied) |
| **Stability:** | ≥1 year |
| **Purity:** | ≥98% 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 |

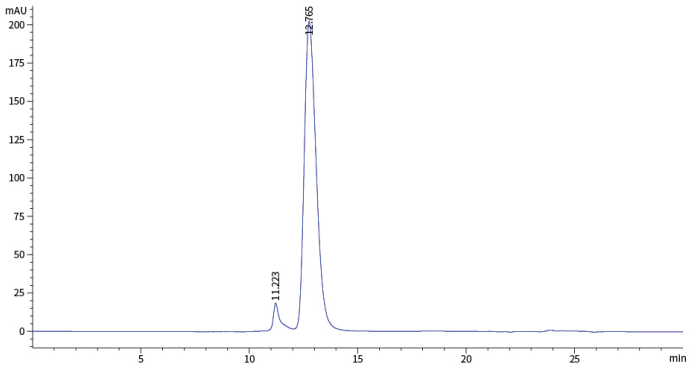
*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

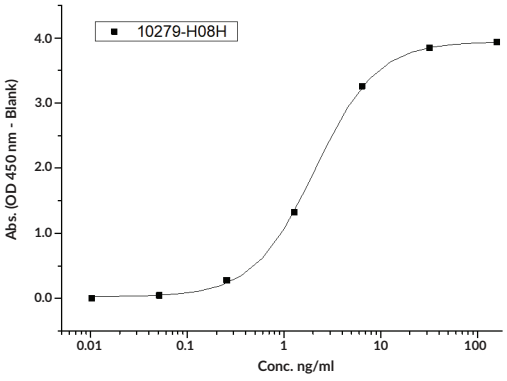
### Images



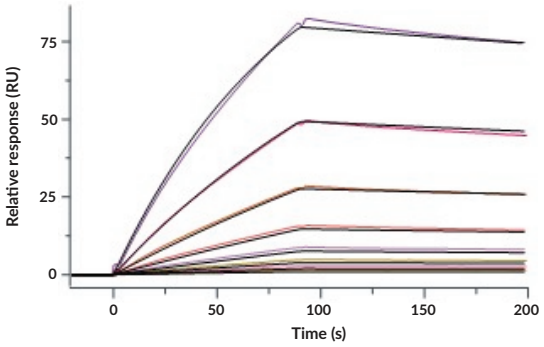

**Lane 1:** MW Markers
**Lane 2:** Axl Extracellular Domain

**SDS-PAGE Analysis of ACTRIIB Extracellular Domain.** This protein has a calculated molecular weight of 46.5 kDa. It has an apparent molecular weight of approximately 60-70 kDa by SDS-PAGE under reducing conditions due to glycosylation.




Label Recombinant Mouse GAS6 Protein (His Tag) with biotin. Immobilized Axl Extracellular Domain (human, recombinant) at 0.25 µg/ml (100 µl/well) can bind biotinylated Recombinant Mouse GAS6 Protein, the $EC_{50}$ is 1.3-3.9 ng/ml (routinely tested).




Axl Extracellular Domain (human, recombinant) (Item No. 44185) immobilized on CM5 chip, can bind recombinant human GAS6 protein (His-tag) with an affinity constant of 5.700 nM as determined in an SPR assay (Biacore 8K) (QC tested).

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## Description

Axl is a receptor tyrosine kinase and member of the TAM kinase family.[1,2] It is composed of two immunoglobulin-like (Ig-like) domains, two fibronectin-like III domains, an extracellular cleavage site, a transmembrane region, and a C-terminal kinase domain.[1] It is ubiquitously expressed and localizes to the cell membrane.[3,4] After homodimerization, Axl is activated by growth arrest-specific protein 6 (GAS6) and is involved in promoting proliferation and hematopoietic lineage differentiation and negatively regulating antigen-presenting cell activation.[1,2,5] The extracellular domain of Axl can be cleaved by metalloproteinases, releasing soluble Axl to bind and activate membrane-associated Axl.[3,4] In cancer, Axl promotes metastasis, epithelial-to-mesenchymal transition (EMT), and survival.[5] Increased expression of *AXL* is associated with shorter progression-free survival in patients with non-small cell lung cancer (NSCLC).[6] Cayman's Axl Extracellular Domain (human, recombinant) protein can be used for binding assays. This protein consists of 428 amino acids, has a calculated molecular weight of 46.5 kDa, and a predicted N-terminus of Glu33 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 60-70 kDa due to glycosylation.

## References


1. Graham, D.K., DeRyckere, D., Davies, K.D., *et al.* The TAM family: Phosphatidylserine sensing receptor tyrosine kinases gone awry in cancer. *Nat. Rev. Cancer* **14(12)**, 769-785 (2014).
2. Axelrod, H. and Pienta, K.J. Axl as a mediator of cellular growth and survival. *Oncotarget.* **5(19)**, 8818-8852 (2014).
3. Verma, A., Warner, S.L., Vankayalapati, H., *et al.* Targeting Axl and Mer kinases in cancer. *Mol. Cancer Ther.* **10(10)**, 1763-1773 (2016).
4. Tondo, G., Perani, D., and Comi, C. TAM receptor pathways at the crossroads of neuroinflammation and neurodegeneration. *Dis. Markers* 2387614 (2019).
5. Myers, K.V., Amend, S.R., and Pienta, K.J. Targeting Tyro3, Axl and MerTK (TAM receptors): Implications for macrophages in the tumor microenvironment. *Mol. Cancer* **18(1)**, 94 (2019).
6. Yoshimura, A., Yamada, T., Serizawa, M., *et al.* High levels of AXL expression in untreated EGFR-mutated non-small cell lung cancer negatively impacts the use of osimertinib. *Cancer Sci.* **4(2)**, 606-618 (2023).



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