

PRODUCT INFORMATION

Cab45 (37-362) (human, recombinant)

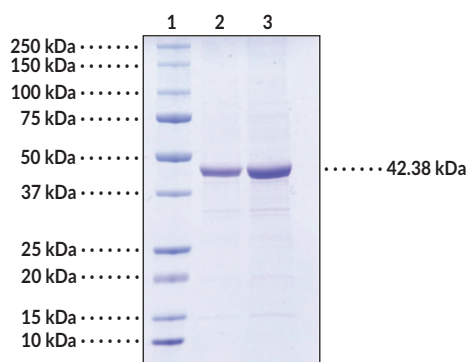
Item No. 40822

Overview and Properties

Synonyms:	45 kDa Calcium-binding protein, SDF-4, Stromal Cell-derived Factor 4
Source:	Recombinant human C-terminal V5- and His-tagged Cab45 expressed in insect cells
Amino Acids:	37-362 (full length)
Uniprot No.:	Q9BRK5
Molecular Weight:	42.38 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥80%
Supplied in:	20 mM HEPES, pH 7.5, with 150 mM sodium chloride and 5% glycerol
Protein Concentration:	<i>batch specific</i> mg/ml

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

Image



Lane 1: MW Markers

Lane 2: Cab45 (37-362) (2 µg)

Lane 3: Cab45 (37-362) (4 µg)

SDS-PAGE Analysis of Cab45 (37-362). This protein has a calculated molecular weight of 42.38 kDa.

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.

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Description

45 kDa Calcium-binding protein (Cab45), also known as stromal cell-derived factor 4 (SDF-4), is a member of the Cab45/reticulocalbin/ERC45/calumenin (CREC) protein family encoded by *SDF4* in humans.^{1,2} *SDF4* encodes a 362-amino acid precursor protein that contains an N-terminal signal sequence, six EF-hand motifs, and a C-terminal HEEF motif. Alternative splicing produces three isoforms: the Golgi-localized variant Cab45-G, the cytosolic variant Cab45-C, and the secreted variant Cab45-S, each with different domain composition, as well as physiological and pathophysiological roles.¹⁻³ Cab45 levels are increased in PANC-1 pancreatic, LIM1215 colorectal, and HeLa cervical cancer cells.³ *SDF4*^{-/-} induces perinuclear accumulation of lysosomes and secretion of the unprocessed protein precursors prosaposin and progranulin in HeLa cells, indicating a role for Cab45 in lysosomal positioning.⁴

References

1. Chi, J.Y., Hsiao, Y.W., Liu, H.L., *et al.* Fibroblast CEBPD/SDF4 axis in response to chemotherapy-induced angiogenesis through CXCR4. *Cell Death Discov.* **7**(1), 94 (2021).
2. Honoré, B. The rapidly expanding CREC protein family: Members, localization, function, and role in disease. *Bioessays* **31**(3), 262-277 (2009).
3. Gong, W., Martin, T.A., Sanders, A.J., *et al.* Location, function and role of stromal cell-derived factors and possible implications in cancer (review). *Int. J. Mol. Med.* **47**(2), 435-443 (2021).
4. Tran, M.L., Tüshaus, J., Kim, Y., *et al.* Cab45 deficiency leads to the mistargeting of progranulin and prosaposin and aberrant lysosomal positioning. *Traffic* **24**(1), 4-19 (2023).

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