

Stabilin-2 mAb (3.1), InVivoPure

Endotoxin level ≤ 2 EU/mg

Description:

Stabilin-2, also known as Feel2, FEX2, FELE-2, FELL2, is a conserved class H scavenger receptors expressed by sinusoidal endothelial cells (ECs) in the liver, lymph nodes, spleen and bone marrow [1, 5]. Stabilin-2 is the major receptor for hyaluronan; blocking antibodies or genetic ablation of Stabilin-2 inhibits hyaluronan uptake and leads to increased systemic hyaluronan levels [2, 3]. Besides hyaluronan, Stabilin-2 also binds other glycosaminoglycans, including heparin [4]. It is also involved in antisense oligonucleotide pharmacokinetics and nanoparticle uptake, and it controls Von Willebrandt factor-factor VIII complex half-life and immunogenicity [5].

The antibody is suitable material for validation and was used in the following applications: IF; IHC staining of rat, mouse spleen or liver; FACS on stably full length mStab2 transfected HEK293 cells and in *in-vivo* blocking studies.

The antibody is produced exclusively under serum-free conditions from hybridoma and purified through purification with Protein-A affinity chromatography.

Product-ID:	AK2810P
Immunogen:	Recombinant mouse Stabilin-2 fragment (residues 1-730 of Q8R4U0, fused to mouse IgG2b-Fc)
Host:	Mouse
Clonality:	Monoclonal
Isotype:	Mouse IgG1
Formulation:	Liquid, PBS, pH 7.4, 0.2 μ m sterile filtered
Concentration:	≥ 1.00 mg/ mL
Purity:	$\geq 90\%$ (CGE, reducing conditions) $\leq 10\%$ aggregates (analytical SEC)
Endotoxin:	≤ 2 EU/ mg (LAL test)
Storage:	2 - 8 °C
Recommended Isotype Control:	Mouse IgG1- Antibody (AK3421P)

The product is for research use only and not for use in diagnostic or therapeutic procedures.

InVivo BioTech Services GmbH is certified to [ISO 9001](#) and [ISO 13485](#).

Literature:

- [1] Politz O, Gratchev A, McCourt PA, Schledzewski K, Guillot P, Johansson S, Svineng G, Franke P, Kannicht C, Kzhyshkowska J, Longati P, Velten FW, Johansson S, Goerdts S. Stabilin-1 and -2 constitute a novel family of fasciadin-like hyaluronan receptor homologues. *Biochem J*. 2002 Feb 15;362(Pt 1):155-64. doi: 10.1042/0264-6021:3620155. PMID: 11829752; PMCID: PMC1222372.
- [2] Schledzewski K, Géraud C, Arnold B, Wang S, Gröne HJ, Kempf T, Wollert KC, Straub BK, Schirmacher P, Demory A, Schönhaber H, Gratchev A, Dietz L, Thierse HJ, Kzhyshkowska J, Goerdts S. Deficiency of liver sinusoidal scavenger receptors stabilin-1 and -2 in mice causes glomerulofibrotic nephropathy via impaired hepatic clearance of noxious blood factors. *J Clin Invest*. 2011 Feb;121(2):703-14. doi: 10.1172/JCI44740. PMID: 21293057; PMCID: PMC3026735.
- [3] Hirose Y, Saijou E, Sugano Y, Takeshita F, Nishimura S, Nonaka H, Chen YR, Sekine K, Kido T, Nakamura T, Kato S, Kanke T, Nakamura K, Nagai R, Ochiya T, Miyajima A. Inhibition of Stabilin-2 elevates circulating hyaluronic acid levels and prevents tumor metastasis. *Proc Natl Acad Sci U S A*. 2012 Mar 13;109(11):4263-8. doi:10.1073/pnas.1117560109. Epub 2012 Feb 27. PMID: 22371575; PMCID: PMC3306694.
- [4] Harris EN, Parry S, Sutton-Smith M, Pandey MS, Panico M, Morris HR, Haslam SM, Dell A, Weigel PH. N-Glycans on the link domain of human HARE/Stabilin-2 are needed for hyaluronan binding to purified ecto-domain, but not for cellular endocytosis of hyaluronan. *Glycobiology*. 2010 Aug;20(8):991-1001. doi: 10.1093/glycob/cwq057. Epub 2010 Apr 14. PMID: 20466649; PMCID: PMC2895729.
- [5] Manta CP, Leibing T, Friedrich M, Nolte H, Adrian M, Schledzewski K, Krzistetzko J, Kirkamm C, David Schmid C, Xi Y, Stojanovic A, Tonack S, de la Torre C, Hammad S, Offermanns S, Krüger M, Cerwenka A, Platten M, Goerdts S, Géraud C. Targeting of Scavenger Receptors Stabilin-1 and Stabilin-2 Ameliorates Atherosclerosis by a Plasma Proteome Switch Mediating Monocyte/Macrophage Suppression. *Circulation*. 2022 Dec 6;146(23):1783-1799. doi: 10.1161/CIRCULATIONAHA.121.058615. Epub 2022 Nov 3. PMID: 36325910.

Product citations

- 1 Harris EN, Baker E. Role of the Hyaluronan Receptor, Stabilin-2/HARE, in Health and Disease. *Int J Mol Sci*. 2020 May 15;21(10):3504. doi: 10.3390/ijms21103504. PMID: 32429122; PMCID: PMC7279005.
- 2 Martens JH, Kzhyshkowska J, Falkowski-Hansen M, Schledzewski K, Gratchev A, Mansmann U, Schmuttermaier C, Dippel E, Koenen W, Riedel F, Sankala M, Tryggvason K, Kobzik L, Moldenhauer G, Arnold B, Goerdts S. Differential expression of a gene signature for scavenger/lectin receptors by endothelial cells and macrophages in human lymph node sinuses, the primary sites of regional metastasis. *J Pathol*. 2006 Mar;208(4):574-89. doi: 10.1002/path.1921. PMID: 16440291.
- 3 Géraud C, Mogler C, Runge A, Evdokimov K, Lu S, Schledzewski K, Arnold B, Hämmerling G, Koch PS, Breuhahn K, Longrich T, Marx A, Weiss C, Damm F, Schmieder A, Schirmacher P, Augustin HG, Goerdts S. Endothelial transdifferentiation in hepatocellular carcinoma: loss of Stabilin-2 expression in peri-tumourous liver correlates with increased survival. *Liver Int*. 2013 Oct;33(9):1428-40. doi: 10.1111/liv.12262. Epub 2013 Jul 21. PMID: 23870052.
- 4 Géraud C, Evdokimov K, Straub BK, Peitsch WK, Demory A, Dörflinger Y, Schledzewski K, Schmieder A, Schemmer P, Augustin HG, Schirmacher P, Goerdts S. Unique cell type-specific junctional complexes in vascular endothelium of human and rat liver sinusoids. *PLoS One*. 2012;7(4):e34206. doi: 10.1371/journal.pone.0034206. Epub 2012 Apr 3. PMID: 22509281; PMCID: PMC3317944.
- 5 Géraud C, Koch PS, Zierow J, Klapproth K, Busch K, Olsavszky V, Leibing T, Demory A, Ulbrich F, Dieltz M, Singh S, Sticht C, Breitkopf-Heinlein K, Richter K, Karppinen SM, Pihlajaniemi T, Arnold B, Rodewald HR, Augustin HG, Schledzewski K, Goerdts S. GATA4-dependent organ-specific endothelial differentiation controls liver development and embryonic hematopoiesis. *J Clin Invest*. 2017 Mar 1;127(3):1099-1114. doi: 10.1172/JCI90086. Epub 2017 Feb 20. PMID: 28218627; PMCID: PMC5330741.
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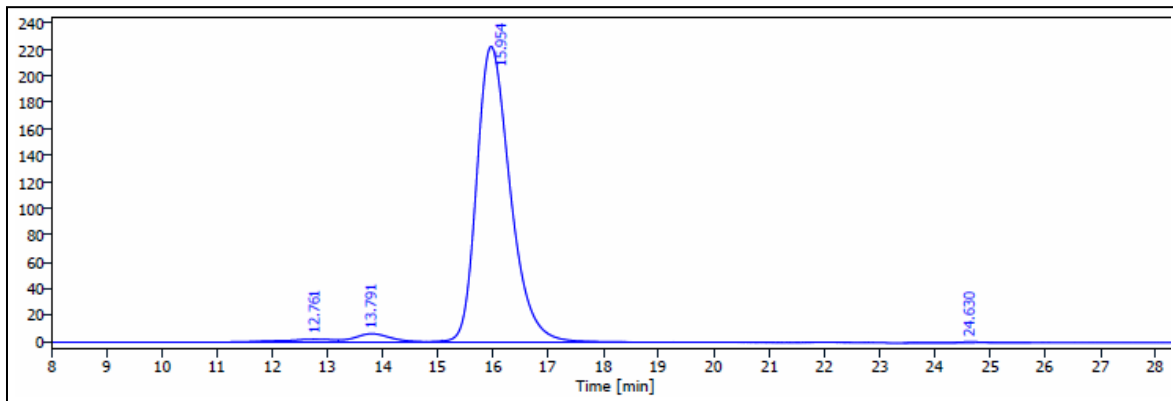
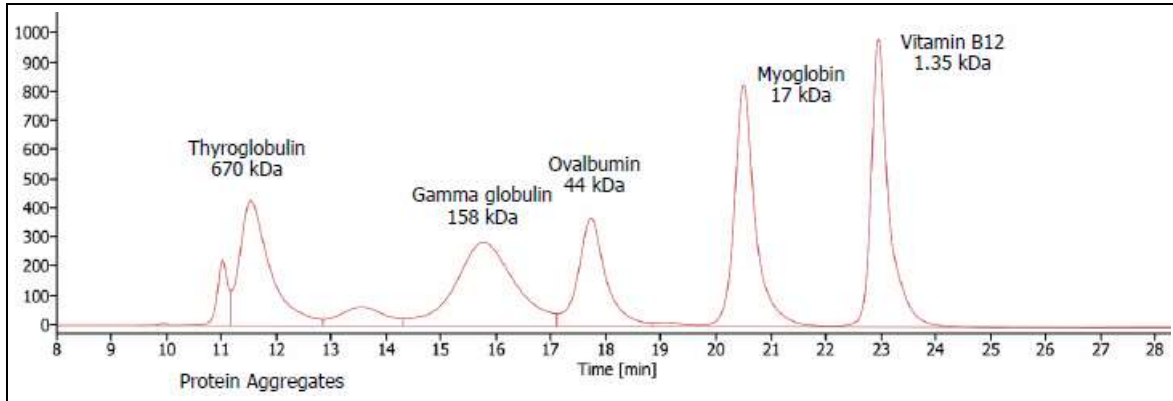
PRODUCT INFORMATION



- Neumaier M, Weyer V, Groden C, Gröne HJ, Richter K, Mogler C, Taketo MM, Schledzewski K, Géraud C, Goerdts S, Koch PS. Bone marrow sinusoidal endothelium controls terminal erythroid differentiation and reticulocyte maturation. *Nat Commun.* 2021 Nov 29;12(1):6963. doi: 10.1038/s41467-021-27161-3. PMID: 34845225; PMCID: PMC8630019.
- 8 O. Politz *et al.*, "Stabilin-1 and -2 constitute a novel family of fasciclin-like hyaluronan receptor homologues," *Biochem. J.*, vol. 362, no. 1, pp. 155–164, 2002, doi: 10.1042/0264-6021:3620155.
- 9 Manta CP, Leibing T, Friedrich M, Nolte H, Adrian M, Schledzewski K, et al. Targeting of Scavenger Receptors Stabilin-1 and Stabilin-2 Ameliorates Atherosclerosis by a Plasma Proteome Switch Mediating Monocyte/Macrophage Suppression. *Circulation.* 2022;146(23):1783–99.
- 10 Dunkel J, Viitala M, Karikoski M, Rantakari P, Virtakoivu R, Elima K, et al. Enhanced antibody production in clever-1/Stabilin-1-deficient mice. *Front Immunol.* 2018;9(OCT):1–11.

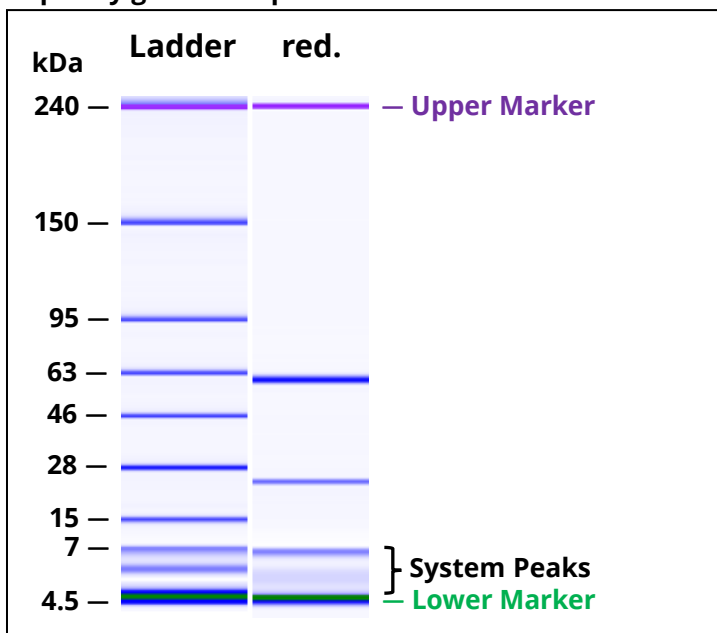
Stabilin-2 mAb (3.1), InVivoPure — Supplementary Data

Analytical SEC:



Analytical SEC of purified protein (blue) in comparison with gel filtration standard (red).

Capillary gel electrophoresis:



CGE of the purified protein under reducing (red.) conditions.