



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

FAM64A siRNA (m): sc-145051

BACKGROUND

FAM64A, also known as CATS (CALM-interactor expressed in thymus and spleen) or RCS1 (regulator of chromosome segregation protein 1), is a 248 amino acid cell division protein that may control the metaphase to anaphase transition during mitosis. FAM64A localizes to the cytoplasm, nucleolus and nucleus and is expressed in thymus, spleen, colon, ovary and small intestine. Up-regulation of FAM64A begins at S phase and increases up to G₂ and G₂/M phases. A sudden drop in expression happens as cells exit mitosis, with lowest levels in quiescent cells or at the G₁ phase. Isoform 1 and 2 interact with CALM (clathrin assembly lymphoid myeloid leukemia protein), which target CALM to the nucleus. FAM64A interacts with MTA2 (metastasis-associated protein MTA2) and HDAC2 (histone deacetylase 2) subunits of the chromatin-remodeling complex (NuRD) during mitosis and has the strongest association in prometaphase. The gene encoding FAM64A maps to human chromosome 17p13.2.

REFERENCES

1. Archangelo, L.F., Gläsner, J., Krause, A. and Bohlander, S.K. 2006. The novel CALM interactor CATS influences the subcellular localization of the leukemogenic fusion protein CALM/AF10. *Oncogene* 25: 4099-4109.
2. Archangelo, L.F., Greif, P.A., Hölzel, M., Harasim, T., Kremmer, E., Przemeck, G.K., Eick, D., Deshpande, A.J., Buske, C., de Angelis, M.H., Saad, S.T. and Bohlander, S.K. 2008. The CALM and CALM/AF10 interactor CATS is a marker for proliferation. *Mol. Oncol.* 2: 356-367.
3. Daub, H., Olsen, J.V., Bairlein, M., Gnad, F., Oppermann, F.S., Körner, R., Greff, Z., Keri, G., Stemmann, O. and Mann, M. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. *Mol. Cell* 31: 438-448.
4. Dephoure, N., Zhou, C., Villen, J., Beausoleil, S.A., Bakalarski, C.E., Elledge, S.J. and Gygi, S.P. 2008. A quantitative atlas of mitotic phosphorylation. *Proc. Natl. Acad. Sci. USA* 105: 10762-10767.
5. Zhao, W.M., Coppinger, J.A., Seki, A., Cheng, X.L., Yates, J.R. and Fang, G. 2008. RCS1, a substrate of APC/C, controls the metaphase to anaphase transition. *Proc. Natl. Acad. Sci. USA* 105: 13415-13420.
6. Olsen, J.V., Vermeulen, M., Santamaria, A., Kumar, C., Miller, M.L., Jensen, L.J., Gnad, F., Cox, J., Jensen, T.S., Nigg, E.A., Brunak, S. and Mann, M. 2010. Quantitative phosphoproteomics reveals widespread full phosphorylation site occupancy during mitosis. *Sci. Signal.* 3: ra3.
7. Rigbolt, K.T., Prokhorova, T.A., Akimov, V., Henningsen, J., Johansen, P.T., Kratchmarova, I., Kassem, M., Mann, M., Olsen, J.V. and Blagoev, B. 2011. System-wide temporal characterization of the proteome and phosphoproteome of human embryonic stem cell differentiation. *Sci. Signal.* 4: rs3.
8. Archangelo, L.F., Greif, P.A., Maucuer, A., Manceau, V., Koneru, N., Bigarella, C.L., Niemann, F., dos Santos, M.T., Kobarg, J., Bohlander, S.K. and Saad, S.T. 2013. The CATS (FAM64A) protein is a substrate of the Kinase Interacting Stathmin (KIS). *Biochim. Biophys. Acta* 1833: 1269-1279.

CHROMOSOMAL LOCATION

Genetic locus: Fam64a (mouse) mapping to 11 B4.

PRODUCT

FAM64A siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FAM64A shRNA Plasmid (m): sc-145051-SH and FAM64A shRNA (m) Lentiviral Particles: sc-145051-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNase-free water provided. Resuspension of the siRNA duplex in 330 µl of RNase-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

FAM64A siRNA (m) is recommended for the inhibition of FAM64A expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FAM64A gene expression knockdown using RT-PCR Primer: FAM64A (m)-PR: sc-145051-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.