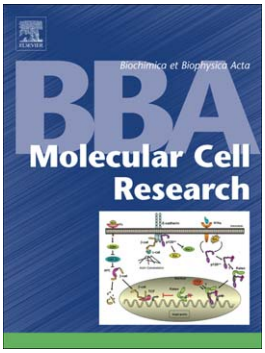

An insight into the orphan nucleotide sugar transporter SLC35A4

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An insight into the orphan nucleotide sugar transporter SLC35A4

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Highlights:

- Endogenous SLC35A4 localizes mainly to the Golgi apparatus.
- Both N- and C-termini of SLC35A4 are directed towards the cytosol.
- SLC35A4 directly associates with SLC35A5.
- *SLC35A4* knock-out triggers relocalization of SLC35A2/SLC35A3 complex.
- SLC35A2-deficient cells are unable to co-express SLC35A3 and SLC35A4.

Keywords: nucleotide sugar transporters, SLC35A subfamily, Golgi apparatus, endoplasmic reticulum, glycosylation

Abbreviations used: ER – endoplasmic reticulum, WM1341-D – human melanoma cell line, COS-7 – African green monkey kidney cell line, HEK293T – human embryonic kidney 293 cells resistant to neomycin, HepG2 – human liver cancer cell line, MDCK – Madin-Darby canine kidney II, MDCK-RCA^r – ricin-resistant Madin-Darby canine kidney II, NST – nucleotide sugar transporter, FLIM – fluorescence lifetime imaging microscopy, FRET – Förster resonance energy transfer, eGFP – enhanced green fluorescent protein, mRFP – monomeric red fluorescent protein, Mgat1 – mannosyl (α-1,3-)-glycoprotein β-1,2-*N*-acetylglucosaminyltransferase

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