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# Retromer Chaperone, R55 - Calbiochem A cell-permeable pharmacological chaperone to increase neuronal retromer levels. Improves Vps35-Vps29-Vps26 retromer complex stability.

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Description

A cell-permeable, non-toxic thienyl bis-isothiourea derived compound that acts as a pharmacological chaperone to increase neuronal retromer levels and improve the stability of trimeric Vps35-Vps29-Vps26 retromer complex. Shown to significantly increase the level of Vsp35 (EC50 = 3.3 &#181,M) and Vsp29 in hippocampal neurons. Binds at the interface between Vps35 and Vps29 (Kd = 5 &#181,M) and interacts with side chains from both proteins. However, it does not affect the thermal unfolding of individual proteins and has no effect on mRNA levels of Vps35 and Vsp29. Shown to reduce the endogenous levels of both Abeta40 and Abeta42 and is also effective in reducing human Abeta40 and -42 levels in J20 transgenic murine model of AD36 (IC50 ~ 12 &#181,M). Also reduces the levels of both endogenous beta-CTF and sAPPbeta and increases the level of sAPPalpha in the medium. Displays a partial stabilizing effect on Vps35 even in the context of Vps29 knockdown.Please note that the molecular weight for this compound is batch-specific due to variable water content., A cell-permeable, non-toxic thienyl bis-isothiourea derived compound that acts as a pharmacological chaperone to increase neuronal retromer levels and improve the stability of trimeric Vps35-Vps29-Vps26 retromer complex. Shown to significantly increase the level of Vsp35 (EC50 = 3.3 &#181,M) and Vsp29 in hippocampal neurons. Binds at the interface between Vps35 and Vps29 (Kd = 5 &#181,M) and interacts with side chains from both proteins. However, it does not affect the thermal unfolding of individual proteins and has no effect on mRNA levels of Vps35 and Vsp29. Shown to reduce the endogenous levels of both Abeta40 and Abeta42 and is also effective in reducing human Abeta40 and -42 levels in J20 transgenic murine model of AD36 (IC50 ~ 12 &#181,M). Also reduces the levels of both endogenous beta-CTF and sAPPbeta and increases the level of sAPPalpha in the medium. Displays a partial stabilizing effect on Vps35 even in the context of Vps29 knockdown.