Revision 3

Store at -20C

#81453

VPS35 (E6S4I) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	81	Rabbit IgG	#Q96QK1	55737

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

VPS35 (E6S4I) Rabbit mAb recognizes endogenous levels of total VPS35 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu775 of human VPS35 protein.

Background

Retromer is a hetero-pentameric protein complex that mediates retrograde transport of transmembrane proteins from endosomes to the trans-Golgi network (TGN). The retromer complex consists of two protein compounds, a sorting nexin dimer and a trimeric cargo-selective complex (CSC) composed of vacuolar protein sorting-associated protein 35 (VPS35), VPS26, and VPS29 (1-3). VPS35 is the largest of the three CSC proteins, and interacts with VPS26 through its amino terminus and with VPS29 through its carboxy terminus (1).

VPS35 and the retromer are involved in trafficking of specific cargo along the dendritic processes of neurons, including appropriate NMDA and AMPA receptor expression at synapses, and β2-adrenergic receptors (β2AR) outside of synapses and throughout the dendrite (4). It has been shown that VPS35 expression is required for survival of dopaminergic neurons through its role in mitochondrial fusion and function (5). Mutations in the *VPS35* gene have been shown to cause late-onset, autosomal dominant familial Parkinson's disease (6). VPS35 has also been implicated in Alzheimer's disease by playing a role in regulation of Aβ peptide levels, with reduced protein levels of VPS35 seen in patient tissues (7).

Background References

1. Seaman, M.N. (2005) *Trends Cell Biol* 15, 68-75.
2. Burd, C. and Cullen, P.J. (2014) *Cold Spring Harb Perspect Biol* 6, pii: a016774. doi: 10.1101/cshperspect.a016774.
3. Bonifacino, J.S. and Hurley, J.H. (2008) *Curr Opin Cell Biol* 20, 427-36.
4. Choy, R.W. et al. (2014) *Neuron* 82, 55-62.
5. Tang, F.L. et al. (2015) *Cell Rep* 12, 1631-43.
6. Williams, E.T. et al. (2017) *J Parkinsons Dis* 7, 219-33.
7. Small, S.A. et al. (2005) *Ann Neurol* 58, 909-19.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.