

Lot # XXXXX

MATERIAL DATA SHEET

Miro/Rhot1, human recombinant Cat. # SP-490

Mitochondrial Rho GTPase 1 (also known as Miro1 or Rhot1) is a membrane associated GTPase with a predicted molecular weight of 71 kDa. Miro1 has been reported to directly associate with the KIF5 motor protein, allowing mitochondria to move along microtubules. A number of publications have identified Miro1 as an *in vivo* substrate for the E3 Ubiquitin ligase Parkin (encoded by the PARK2 gene), an essential part of the cellular machinery that participates in the removal of damaged mitochondria.

Useful as an *in vitro* substrate for activated Parkin, this recombinant protein contains an N-terminal 6-His tag, and amino acids Ile186-Thr591 of NP_060777.3.

Product Information

Quantity:	100 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 8.0, 200 mM NaCl, 10% (v/v) Glycerol, 2 mM TCEP
MW:	50 kDa
Purity:	≥ 90% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue Stain.

Use & Storage

Use:	Reaction Conditions will be optimized for each specific application. In a 50 µl reaction containing 1 µM activated Parkin E3 ligase (E3-160 or E3-162), 1 µM His6-Miro1 is fully converted to Ubiquitinated forms in 60 minutes.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Birsa, N. <i>et al.</i> (2014) <u>J Biol Chem.</u> 289 : 14569 Kazlauskaitė, A. <i>et al.</i> (2014) <u>Open Biol.</u> 4 : 130213 Klosowiak, J.L. <i>et al.</i> (2016) <u>Sci. Rep.</u> 6 : 33019 MacAskill, A.F. <i>et al.</i> (2009) <u>Neuron</u> 61 : 541 Ordureau, A. <i>et al.</i> (2015) <u>Proc Natl Acad Sci</u> 112 : 637
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