M-Ras/R-Ras3\(^{\text{His}}\) (Q71L) muscle and microspikes Ras, related ras viral oncogene homolog 3 human, recombinant, \textit{E. coli}

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Amount</th>
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<td>PR-396</td>
<td>50 µg</td>
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For \textit{in vitro} use only!

**Shipping:** shipped on blue ice

**Storage Conditions:** store at -20 °C

**Additional Storage Conditions:** avoid freeze/thaw cycles

**Shelf Life:** 12 months

**Accession number:** NM_012219

**Purity:** > 95 % (SDS-PAGE)

**Form:** liquid (Supplied in 25 mM HEPES pH 7.5, 50 mM NaCl, 5 mM MgCl\(_2\), 1 µM GDP and 50% glycerol)

**Description:**
Ras proteins are members of the superfamily of small GTP-binding proteins that function as molecular switches controlling a variety of signaling and transport pathways. The Ras family of GTP-binding proteins consists of the classical Ras (Ha-, K-, and N-), R-Ras, Rap1, Rap2, Raf, Rho, Rin, Rif, TC11/R-Ras2, and M-Ras/R-Ras3 (M-Ras). Stimulation of Ba/F3-Fms cells with either IL-3 or CSF-1 resulted in efficient activation of both K-Ras 4B and M-Ras. Stimulation of fibroblasts with EGF also led to more efficient activation of K-Ras 4B than of H-Ras or N-Ras, and the activation of M-Ras was very strong. An S27N mutant of M-Ras, like the analogous H-Ras S17N mutant, was a dominant inhibitor of activation of the \textit{c-fos} promoter by constitutively active Src Y527F, suggesting that M-Ras and p21 Ras shared guanine nucleotide exchange factors and are likely to be activated in parallel. M-Ras (Q71L) is a constitutive active mutant of M-Ras.

**Activity:**
GTP\(_\gamma\)S binding: >750 mmol/mol.

**Selected References:**
