

## Background

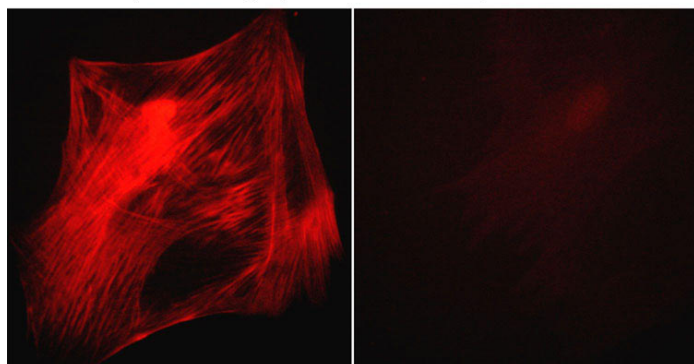
During cell migration, actin assembly drives cell membrane protrusion, while microtubules (MTs) extend within protrusions to promote adhesion site turnover. Memo (mediator of ErbB2-driven cell motility) is an effector of the ErbB2 receptor tyrosine kinase involved in breast carcinoma cell migration. This effector may be important for mediating ErbB2-regulated changes in actin and MT dynamics during cell motility. Memo, a 297-amino-acid protein, has homology to class III nonheme iron-dependent dioxygenases, however it has not been shown to display metal binding or enzymatic activity. It has been shown to bind ErbB2 (Tyr-1227) phosphopeptide via its putative enzymatic active site. Memo and PLCγ1 interaction with ErbB2 is essential for HRG-induced chemotaxis. Furthermore, organization of the lamellipodial actin network is coordinated by signaling from Memo to the RhoA–mDia1 pathway localized to the plasma membrane. In addition, Memo may regulate actin dynamics by promoting cofilin depolymerizing and severing of F-actin.

## Background References

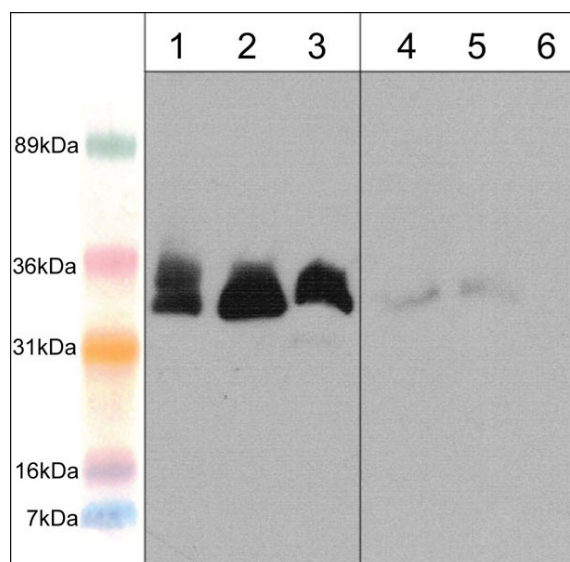
- Qiu, C. et al. (2008) J. Biol. Chem. 283:2734.  
Zaoui, K. et al. (2008) J. Cell Biol. 183:401.  
Meira, M. et al. (2009) J. Cell Sci. 122:787.

Memo (N-terminal region)

Peptide Blocked



Immunocytochemical labeling of Memo in rabbit spleen fibroblasts that were fixed in paraformaldehyde and permeabilized with NP-40. The cells were probed with the Memo (N-terminal Region) MP3721, then the antibody was detected using goat anti-rabbit DyLight® 594. The antibody was used in the absence (left) or presence (right) of its blocking peptide (MX3725).



Western blot analysis of Memo expression in adult mouse heart (lane 1 & 4), mouse C2C12 cells (lane 2 & 5), and rabbit spleen fibroblast cells (lane 3 & 6). The blot was probed with anti-Memo (N-terminal region) (MP3721; lanes 1-6) in the presence (lanes 4-6) or absence (lanes 1-3) of Memo blocking peptide (MX3725).

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

**Immunogen**                      **Uniprot ID: Q9Y316**

Memo synthetic peptide (coupled to KLH) corresponding to amino acid residues in the N-terminal region of human Memo. This peptide sequence is highly conserved in rat, mouse, and chicken Memo.

**Buffer and Storage**

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

**Applications**

WB	1:1000
ELISA	1:2000
ICC	1:200

**Species Reactivity**

Hu, Rt, Ms, Ck

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot  
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

**Specificity**

This antibody was affinity purified using Memo (N-terminal region) peptide (without carrier). The antibody detects a significant 33 kDa\* protein corresponding to the molecular mass of Memo on SDS-PAGE immunoblots of mouse heart, mouse C2C12, and rabbit spleen fibroblasts.

\*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

**Related Products**

AK6060 Actin & Tubulin Antibody Sampler Kit

RP1361 RhoA (Ser-188), phospho-specific Rabbit Polyclonal

RP1501 Rho (Central region) Rabbit Polyclonal

DP3491 mDia2 (C-terminal region) Rabbit Polyclonal

PM1561 PLCγ1 (N-terminal region) Mouse Monoclonal

PP1491 PLCγ1 (Tyr-775), phospho-specific Rabbit Polyclonal

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.