Revision 1

Store at -20C

#13088

eIF4B (1F5) Mouse 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, IHC-P, IF-IC	H	Endogenous	80	Mouse IgG2b	#P23588	1975

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:100
Immunofluorescence (Immunocytochemistry)	1:100

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

eIF4B (1F5) Mouse mAb recognizes endogenous levels of total eIF4B protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant fragment around Val473 of human eIF4B protein.

Background

Eukaryotic initiation factor 4B (eIF4B) is thought to assist the eIF4F complex in translation initiation. In plants, eIF4B is known to interact with the poly-(A) binding protein, increasing its poly-(A) binding activity (1). Heat shock and serum starvation cause dephosphorylation of eIF4B at multiple sites with kinetics similar to those of the corresponding inhibition of translation, while phosphorylation of eIF4B following insulin treatment correlates well with an observed increase in translation (2-5). Multiple kinases, including p70 S6 kinase, can phosphorylate eIF4B *in vitro*, and at least one serum-inducible eIF4B phosphorylation site is sensitive to rapamycin and LY294002 (6). Recently, Ser406 was identified as a novel phosphorylation site regulated by mitogens (7), and the phosphorylation of this site is dependent on MEK and mTOR activity (7). This phosphorylation is shown to be essential for the translational activity of eIF4B (7).

Background References

1. Le, H. et al. (1997) *J. Biol. Chem.* 272, 16247-16255.
2. Duncan, R.F. and Hershey, J.W. (1989) *J. Cell Biol.* 109, 1467-1481.
3. Duncan, R.F. and Hershey, J.W. (1984) *J. Biol. Chem.* 259, 11882-11889.
4. Duncan, R. and Hershey, J.W. (1985) *J. Biol. Chem.* 260, 5493-5497.
5. Manzella, J.M. et al. (1991) *J. Biol. Chem.* 266, 2383-2389.
6. Gingras, A.C. et al. (2001) *Genes Dev.* 15, 807-826.
7. van Gorp, A.G. et al. (2009) *Oncogene* 28, 95-106.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

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.