Human/Mouse/Rat eIF4E Antibody

Monoclonal Mouse IgG_{2B} Clone # 299910

Catalog Number: MAB3228

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat eIF4E.
Source	Monoclonal Mouse IgG_{2B} Clone # 299910
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human eIF4E Met1-Val217 Accession # P06730
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

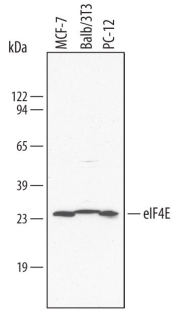
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Knockout Validated	eIF4E is specifically detected in MCF-7 human breast cancer cell line parental cell line but is not detectable in eIF4E knockout MCF-7 cell line.	

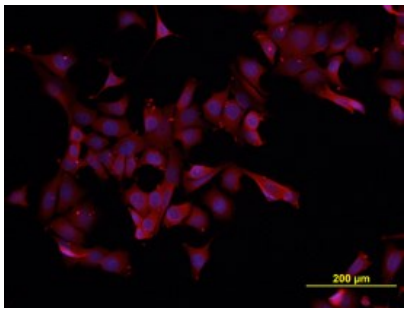
DATA

Western Blot



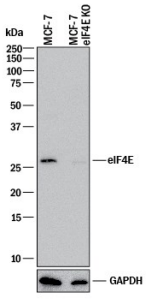
Detection of Human/Mouse/Rat eIF4E by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, Balb/3T3 mouse embryonic fibroblast cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF membrane was probed with 0.1 µg/mL of Mouse Anti-Human/Mouse/Rat eIF4E Monoclonal Antibody (Catalog # MAB3228) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for eIF4E at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



eIF4E in MCF-7 Human Cell Line. eIF4E was detected in immersion fixed MCF-7 human breast cancer cell line using 10 µg/mL Mouse Anti-Human/Mouse/Rat eIF4E Monoclonal Antibody (Catalog # MAB3228) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Knockout Validated



Western Blot Shows Human eIF4E Specificity by Using Knockout Cell Line. Western blot shows lysates of MCF-7 human breast cancer parental cell line and eIF4E knockout MCF-7 cell line (KO). PVDF membrane was probed with 0.5 µg/mL of Mouse Anti-Human/Mouse/Rat eIF4E Monoclonal Antibody (Catalog # MAB3228) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for eIF4E at approximately 25 kDa (as indicated) in the parental MCF-7 cell line, but is not detectable in knockout MCF-7 cell line. GAPDH (Catalog # MAB5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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Human/Mouse/Rat eIF4E Antibody

Monoclonal Mouse IgG_{2B} Clone # 299910

Catalog Number: MAB3228

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

eIF4E (eukaryotic initiation factor 4E) interacts with the 7-methyl-GTP cap structure to facilitate the initiation and rate of translation of mRNA. Together with eIF4G and eIF4A, it forms the eIF4F complex. eIF4E activity has been shown to play a role in cell cycle progression, tumorigenesis, embryonic development, nuclear export and synaptic plasticity.

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