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Product Information

Monoclonal Anti-dEGFR, Cytoplasmic Domain

Clone E-257

produced in mouse, purified immunoglobulin

Product Number **E3031**

Product Description

Monoclonal Anti-dEGFR, Cytoplasmic Domain (mouse IgG1 isotype) is derived from the hybridoma E-257 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with a recombinant protein fragment encoding amino-acids 1200-1267 at the cytoplasmic domain of *Drosophila* EGFR. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-dEGFR, Cytoplasmic Domain recognizes *Drosophila* Epidermal Growth Factor Receptor (EGFR). The antibody may be used in ELISA, immunoblotting, and immunohistochemistry. The antibody epitope resides within amino acids 1200-1267 of *Drosophila* EGFR.

The *Drosophila* EGF receptor (also known as Torpedo or DER) is involved in many developmental processes such as: egg polarity, cell identity in the ventral ectoderm, neurogenesis, development of the Malpighian tubules, and larval eye and wing development. This receptor has four ligands: Gurken, Spitz (the principle ligand), Vein, and Argos. In addition, two accessory proteins modulate its signaling: Rhomboid and Star.¹⁻³ The downstream signaling molecules that are activated by the *Drosophila* EGF receptor include: Shc, DRK (a homolog of mammalian Grb2), a guanine nucleotide exchange factor (SOS) activated by DRK, and downstream targets including orthologs of Ras, Raf and Rolled (MAP Kinase). These latter proteins are members of the RAS-RAF-MAPK pathway that can transmit signals to the cytoskeleton (and as a consequence change the cell shape) and/or to the nucleus (resulting in gene activation).¹⁻³ EGF receptor activity is essential for establishing all cell fates within the developing eye.⁴⁻⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.5 mg/mL

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

A working concentration of 0.25-0.5 µg/mL is determined by immunoblotting, using a recombinant protein representing amino acids 1200-1267 of *Drosophila* EGFR cytoplasmic domain.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Shilo, B.Z., Development, **132**, 4017-4027 (2005).
2. Hidalgo, A., Trends Neuro., **25**, 365-370 (2002).
3. Vaas, M.G., and Rebay, I., Dev. Dyn., **229**, 162-175 (2004).
4. Spencer, S.A., et al., Development, **125**, 4777-4790 (1998).
5. Freeman, M., Cell, **87**, 651-660 (1996).

KAA/EK 04/06

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