

## Product Information

### ANTI-JunD ANTIBODY

Affinity Isolated Antibody

Product Number **J-105**

#### Product Description

Anti-JunD Antibody was developed by immunizing rabbits with a synthetic peptide (Gly-Cys-Gln-Leu-Leu-Pro-Gln-His-Gln-Val-Pro-Ala-Tyr), derived from amino acids 329-341 of the C-terminal end of mouse JunD, as the immunogen.

This antibody detects JunD expressed in both uninduced and induced murine NIH 3T3 cells, AtT-20 and L929 cells in immunoblotting assays. This antibody does not react with JunD in HeLa cells.

Cellular oncogenes, or protooncogenes, play pivotal roles in cellular communication pathways that regulate normal growth, development and differentiation. The cellular oncogene families *fos* and *jun* encode nuclear proteins that can function as transcription factors. The *jun* family of nuclear oncogenes encode cJun (p39), JunB, and JunD.

Fos and Jun dimerize to form Activator Protein-1 (AP-1), a transcriptional factor that binds to the TPA (12-O-tetradecanoylphorbol 13-acetate) response element (TRE) of several cellular and viral genes including human collagenase, metallothionein IIa, stromelysin, interleukin 2, SV40 and polyoma. Fos and Jun contain the 'leucine-zipper' motif that allows for dimerization and an adjacent basic domain required for biological activity. The functionally active form of Fos is in a heterodimer with a member of the Jun family. While Jun family members can form functional homodimers, studies indicate that Fos family members do not self-associate and therefore do not bind DNA on their own. The various dimers differ in their ability to transactivate AP-1 dependent genes.

#### Reagents

Anti-JunD Antibody is supplied lyophilized from phosphate buffered saline (PBS) solution and contains 0.05% sodium azide as a preservative.

#### 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 hazards and safe handling practices.

#### Preparation Instructions

Reconstitute with 100  $\mu$ l of distilled water. Be careful to re-constitute the entire contents of the vial, some parts of the lyophilized pellet may have become dislodged and may not be in the bottom of the vial.

#### Storage/Stability

For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers is not recommended. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

#### Product Profile

Recommended starting titer for Anti-JunD Antibody is 10  $\mu$ l/ml for immunoblotting. However, optimal concentration is dependent on assay and should be determined by serial dilutions.

#### References

1. Angel, P. et al. "The role of Jun, Fos and the AP-1 complex in cell-proliferation and transformation." *Biochim. Biophys. Acta* **1072**, 129-157 (1991).
2. Hyder, S.M. et al. "Steroid hormone-induced expression of oncogene encoded nuclear proteins." *Crit. Rev. Eukaryot. Gene Expr.* **4**, 55-116 (1994).

RYC 11/02

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.