3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

# Product Information

**Monoclonal Anti-Cytip, Clone PDZ 2F9**
produced in rat, purified immunoglobulin

Catalog Number **SAB4200043**

## Product Description

Monoclonal Anti-Cytip (rat IgG1 isotype) is derived from the hybridoma PDZ 2F9 produced by the fusion of mouse myeloma cells (P3X63Ag8.653) and splenocytes from rat immunized with a fusion protein containing human Cytip (GeneID; 9595).[1] The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Cytip recognizes human Cytip. The product may be used in several immunochemical techniques including immunoblotting (~42 kDa), immunoprecipitation, immunocytochemistry and intracytoplasmic flow cytometry.[1, 2]

Cytip (also named cytohesin-1 interacting protein, Cybr, and CASP) is a scaffold protein that contains two adjacent protein-protein interacting domains: PDZ domain and a leucine zipper domain, and a putative C-terminal nuclear targeting signal. It does not have any hydrophobic regions. The leucine-rich domain is responsible for Cytip interaction with cytohesin-1, a guanine exchange factor (GEF) for the ARF (ADP-ribosylation factors) GTPase family members, which have been implicated in cellular vesicular transport and actin cytoskeleton remodeling during cell migration.[1, 3] These Cytip-cytohesin interactions enable it to modulate the activation of ARF genes and to regulate LFA-1 (lymphocyte function associated antigen 1)-mediated cell adhesion in T cells, suggesting it plays a crucial role in controlling cell adhesion and trafficking of the immune system cells.[3, 4]

Cytip protein is highly expressed in the hematopoietic/immune system, mainly in thymus, spleen, peripheral blood leukocytes (PBLs), lymph nodes, bone marrow, and lung. Its expression is up-regulated by cytokines.[3]

## Reagent

Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as preservative.

Antibody concentration: ~ 1.0 mg/mL

## Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze at –20 $^{0}$C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is 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

Immunoblotting: a working antibody concentration of 1-2 µg/mL is recommended using Ramos cell extracts.

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

## References

1. Bohem T., et al., *EMBO J.,* **22**, 1014-1024 (2003).
2. Hofer, S., et al., *Blood,* **107**, 1003-1009 (2006).
3. Tang, P., et al., *Proc. Natl. Acad. Sci. USA,* **99**, 2625-2629. (2002).
4. Mansour, M., et al., *J. Biol. Chem.,* **277**, 32302-32309 (2002).

GG,TD,KAA,PHC 02/10-1