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MOUSE ANTI-TRA-2-54 MONOCLONAL ANTIBODY

CATALOG NUMBER:	MAB4354	**QUANTITY:**	100 µg
LOT NUMBER:		**HOST/ISOTYPE:**	Ms IgG_1
ALTERNATE NAMES:	Liver/Bone/Kidney Alkaline Phosphatase	**CLONE NAME:**	TRA-2-54/2J

BACKGROUND: In humans, four isoforms of alkaline phosphatase exist: intestinal, placental, placenta-like (germ cell type) and tissue-nonspecific. The tissue-nonspecific isoform of alkaline phosphatase is present in bone, liver and kidney; it differs from the other forms by posttranslational modification. Undifferentiated human Embryonal Carcinoma (EC) and Embryonic Stem (ES) cells express very high levels of Alkaline Phosphatase isozyme that is indistinguishable from the isozyme found in liver, bone and kidney. Expression levels of AP decrease following stem cell differentiation. This clone can be used to monitor the expression of the Human Liver / Bone / Kidney isozyme of Alkaline Phosphatase (AP), and hence the differentiation status of human EC and ES cells by flow cytometry.

SPECIFICITY: This antibody does not cross react with other isozymes of AP.

IMMUNOGEN: 2102Ep human Embryonal Carcinoma Cells

APPLICATIONS: FACS Analysis: a starting range of 5-20 µg/mL is suggested.
Immunofluorescence
Immunoprecipitation

Optimal working dilutions must be determined by end user.

SPECIES REACTIVITY: Reactivity has been demonstrated with Liver / Bone / Kidney isozyme of Alkaline Phosphatase (AP) from Humans, Higher Primates (Chimpanzee, Gorilla, Orangutan and Gibbon) and Old World Monkeys AP (Baboon, Rhesus monkey, Mangabey, Mandrill, Celebese Black Ape, African Green Monkey).

No reactivity has been observed with New World Monkeys (Owl Monkey, Squirrel Monkey), Bovine, Canine, Cat, Goat, Guinea Pig, Hamster, Mouse Pig, Rabbit, Rat, Sheep and Tiger.

This antibody does not cross react with other isozymes of AP.

CONTROL: Undifferentiated human embryonic stem cells (H9 line). NTERA-2 cl.D1 whole cell lysate (pluripotent stem cells derived from teratocarcinoma and are considered the malignant counterparts of human embryonic stem cells).

FORMAT: Purified immunoglobulin

PRESENTATION: Liquid in 0.02M PBS, 0.25 NaCl pH 7.6 with 0.1% Sodium Azide

STORAGE/HANDLING: Maintain refrigerated at 2-8℃ in undiluted aliquot s for up to 12 months after date of receipt.

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REFERENCES:

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Henderson J.K. et al. (2002). Preimplantation human embryos and embryonic stem cells show comparable expression of stage-specific embryonic antigens. Stem Cells **20(4)**: 329-337.

Andrews P.W. et al. (1996). Comparative analysis of cell surface antigens expressed by cell lines derived from human germ cell tumours. Int. J. Cancer **66(6)**: 806-816.

Swallow D.M. et al. (1986). Mapping of the gene coding for the human liver/bone/kidney isozyme of alkaline phosphatase to chromosome 1. Ann. Hum. Genet. **50 (Pt 3)**: 229-235.

Andrews P.W. et al (1984). Two monoclonal antibodies recognizing determinants on human embryonal carcinoma cells react specifically with the liver isozyme of human alkaline phosphatase. Hybridoma **3(1)**: 33-39.

Important Note: *During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µL or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.*

For research use only; not for use as a diagnostic.

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