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Data Sheet
ROR1-CHO Recombinant Cell Line
(High Expression)
Catalog #79609-H

BACKGROUND:

Tyrosine-protein kinase transmembrane receptor (ROR1) is an enzyme that in humans is encoded by the *ROR1* gene. The ROR1 is expressed by tumor cells of various hematologic and solid malignancies and is largely absent from postnatal healthy cells and tissues. Treatment with a humanized monoclonal antibody specific for ROR1 (UC-961) can inhibit the capacity of ovarian cancer cells to migrate or engraft immune-deficient mice.

DESCRIPTION:

Recombinant clonal stable CHO cell line constitutively expressing full length human ROR1 protein (Genbank NM_005012.3). Surface expression of ROR1 was confirmed by flow cytometry. Each stable clonal cell line was selected for different levels of ROR1 expression (High, Medium, Low) to mimic different stages of cancer target cells with various ROR1 expression levels.

APPLICATION:

- Screen for activators or inhibitors of ROR1 antibody-mediated cell signaling for immunotherapy research and drug discovery.
- Characterize ROR1 antibodies and ligands for binding assay.

HOST CELL:

CHO K1 cell line, Chinese Hamster Ovary

FORMAT:

Each vial contains ~ 2.5 x 10⁶ cells in 1 ml of Thaw Medium 3 + 10% DMSO.

STORAGE:

Store in liquid nitrogen immediately upon receipt.

CELL CULTURE:

Thaw Medium 3 (BPS Bioscience, #60186): Ham's F-12 medium (Hyclone #SH30526.01) supplemented with 10% FBS (Life Technologies #26140-079), 1% Penicillin/Streptomycin (Hyclone #SV30010.01).

Growth Medium 3B (BPS Bioscience, #79529): Thaw Medium 3 (BPS Bioscience, #60186) plus 500 µg/ml Hygromycin (Thermo Fisher, #10687010).

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RECOMMENDED CULTURE CONDITION:

Thawing cells: Prepare a 15 ml conical tube with 10 ml of pre-warmed Thaw Medium 3 (**no hygromycin**). Quickly thaw cells in a 37°C water bath with constant and slow agitation. Clean the outside of the vial with 70% ethanol and immediately transfer the entire content to Thaw Medium 3 (**no hygromycin**). Avoid pipetting up and down, and gently rock the conical tube.

Spin the cells down at 150 x g for 5 minutes. Discard the medium and re-suspend the cell pellet in fresh Thaw Medium 3 (**no hygromycin**). Transfer the entire content to a T75 flask to distribute the cells. Incubate the cells in a humidified 37°C incubator with 5% CO₂. After 48-72 hours of incubation, change to fresh Thaw Medium 3 (**no hygromycin**), without disturbing the attached cells. Switch to Growth Medium 3D at the first passage.

Subculture: When cells reach 90% confluency, remove the medium and wash twice with PBS (without magnesium or calcium). Treat cells with 1 ml of 0.25% trypsin/EDTA and incubate for 3 minutes at 37°C. After confirming cell detachment by light microscopy, add 10 ml pre-warmed medium and gently pipette up and down to dissociate cell clumps. Dispense 1 ml of the cell suspension into a new T75 flask containing 14 ml pre-warmed growth media (**with hygromycin**). Incubate cells in a humidified 37°C incubator with 5% CO₂. Cells should be split twice per week at a 1:10 split ratio. Freeze cells in 90% FBS with 10% DMSO. Cells have been demonstrated to be stable for at least 15 passages; BPS recommends preparing frozen stocks at an early passage.

MYCOPLASMA TESTING:

This cell line has been screened using the Quick Test Mycoplasma Detection Kit (Biotool.com, #B39032) to confirm the absence of Mycoplasma contamination.

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QUALITY ASSURANCE:

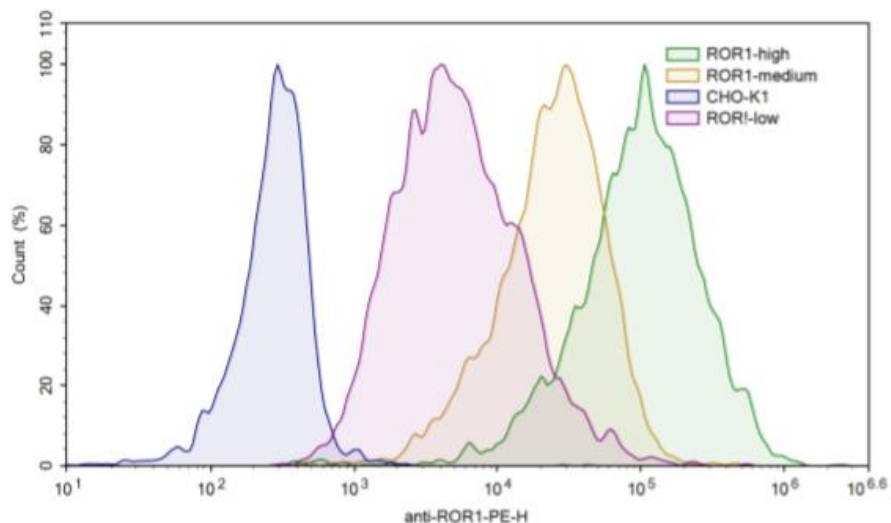


Figure 1. Expression of ROR1 validated by flow cytometry. Flow cytometry using PE-conjugated anti-human ROR1 antibody (Biolegend, #3578004) detects ROR1 on the surface of ROR1 CHO Recombinant Cell Lines with different expression levels: #79609-H, high expresser, green; #79609-M, medium expresser, orange; #79609-L, low expresser, purple; WT CHO-K1 negative control: blue.

VECTOR AND SEQUENCE:

Human ROR1 gene (NM_005012.3) was cloned into pCMV3-Hyg

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MHRPRRRGTRPPLLALLAALLLAARGAAAQETELSVSAELVPTSSWNISSELNKDSYLTLDPEPMNNITTSL
GQTAELHCKVSGNPPPTIRWFKNDAPVVQEPRRLSFRSTIYGSRLRIRNLDTTDTGYFQCVATNGKEVVS
STGVLFVKFGPPPTASPGYSDEYEEDGFCQPYRGIACARFIGNRTVYMESLHMQGEIENQITAAFTMIGT
SSHLSDKCSQFAIPSLCHYAFPYCDETSSVPKPRDLRDECEILENVLCQTEYIFARSNPMILMLRLKLPNC
EDLPQPESPEAANCIRIGIPMADPINKNHKCYNSTGVDYRGTVSVTKSGRQCQPWNSQYPHTHTFTALRF
PELNGGHSYCRNPGNQKEAPWCFTLDENFKSDLCDIPACDSKDSKEKNKMEILYLVPSVAIPLAIALFFF
ICVCRNNQKSSSAPVQRQPKHVRGQNVEMSMLNAYKPKSKAKELPLSAVRFMEELGECFAFGKIYKGHLY
LPGMDHAQLVAIKTLKDYNPNPQQWTEFQQEASLMAELHHPNIVCLLGAVTQEQPVCMLFEYINQGDLE
FLIMRSPHSDVGCSSDEDGTVKSSLDHGDHFLHIAIQIAAGMEYLSSHFFVHKDLAARNILIGEQLHVKISDL
GLSREIYSADYYRVQSKSLLPIRWMPPEAIMYGKFSSDSDIWSFGVVLWEIFSFGLQPYYGFSNQEVIEMV
RKRQLLPCSEDCPPRMYSMLTECWNEIPSRPRFKDIHVRLRSWEGLSSHTSSTTPSGGNATTQTTSLS
ASPVSNLSNPRYPNYMFP SQGITPQQGIAGFIGPPIPQNRQRFIPINGYPIPPGYA AFPAAHYQPTGPPRVIQ
HCPPPKSRSPSSASGSTSTGHVTSLPSSGSNQEANIPLLPHMSIPNHPGGMGITVFGNKSQKPYKIDSKQ
ASLLGDANIHGHTESMISAEI
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RELATED PRODUCTS:

PRODUCT	CAT. #	SIZE
ROR1-CHO Recombinant Cell Line (Medium Expression)	79609-M	2 vials
ROR1-CHO Recombinant Cell Line (Low Expression)	79609-L	2 vials
Growth Medium 3B	79529	500 ml
Thaw Medium 3	60186	100, 500ml
ROR1, GST-tag	40396	10 µg
ROR2, GST-tag	40296	10 µg
ROR1, Fc-Fusion (IgG1), Avi-Tag	79481	10 µg
ROR1, Fc-Fusion (IgG1), Avi-Tag, Biotin-Labeled	79482	10 µg
ROR2, Fc-Fusion (IgG1), Avi-Tag HiP™	100029	100 µg
ROR2, Fc-Fusion (IgG1), Avi-Tag, Biotin-Labeled HiP™	100046	50 µg

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